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LEWIS AND CLARK CAVERNS STATE PARK

Park Management Plan

Public Review Draft

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LEWIS AND CLARK CAVERNS STATE PARK MANAGEMENT PLAN:

TABLE OF CONTENTS
(Draft—February 25, 2000)

EXECUTIVE SUMMARY 1

I. INTRODUCTION AND BACKGROUND 15

History of Lewis and Clark Caverns State Park 15
Park Geography and Resource Summary 19
Facilities/Infrastructure Summary 20
Park Operations 23
Staffing and Organization 27
Park Funding Sources 29
Park Visitation 29
Plan Public Involvement 36

II. PARK MANAGEMENT DIRECTION 39

Significance Statements 39
Park Mission/10 Year Vision 40
Management Goals 41
Management Objectives 41
Management Zoning and Principles 42

III. ISSUES, PREFERRED OPTIONS, AND BENEFITS 55

Issue 1: New Trails 55
Issue 2: Trail Use 56
Issue 3: Lewis and Clark Bicentennial 59
Issue 4: Acquisition of Selected Properties 61
Issue 5: Campground Improvements 62
Issue 6: Hunting 65
Issue 7: Cave Management 66
Issue 8: Jefferson River Access 71
Issue 9: Public Contact Center/Park Entrance Station 72

Issue 10: Bighorn Sheep Reintroduction 75
Preferred Management Plan Alternatives 77
Economic Impacts 78

IV. PLAN TIMELINE AND IMPLEMENTATION 81

Plan Timeline 81
Future Staffing Proposals 84
Park Boundary Survey 85
Environmental Review 85

V. REFERENCES 87

VI. APPENDICES 89

A) Park Facilities Chart 91
B) Original (Draft) Management Plan Alternatives 97
C) Land Acquisition Priorities 101
D) Park Hunting Information 107
E) Known Vascular Plants of Lewis and Clark Caverns State Park 111
F) Known Wildlife Species of Lewis and Clark Caverns State Park 119
G) Summary of Park Survey Results 145

LIST OF FIGURES

FIG. 1	PRELIMINARY MASTER SITE PLAN	21
FIG. 2	STAFF ORGANIZATION	28
FIG. 3	FUNDING SOURCES	30
FIG. 4	PARK VISITATION	31
FIG. 5	VISITOR POINTS OF ORIGIN	33
FIG. 6	CAMPGROUND SITE RENTALS	34
FIG. 7	CAMPING CABIN RENTALS	35
FIG. 8	PARK MANAGEMENT ZONES MAP	43
FIG. 9	PARK TRAIL ROUTES MAP	57
FIG. 10	GROUP USE AREA MAP	63
FIG. 11	PARK HUNTING ZONES MAP	67
FIG. 12	LIMESPUR RIVER ACCESS MAP	73

LEWIS AND CLARK CAVERNS STATE PARK: MANAGEMENT PLAN EXECUTIVE SUMMARY (Draft: February 25, 2000)

INTRODUCTION

This is the executive summary of the first comprehensive management plan developed for Lewis and Clark Caverns, Montana's first state park. This Plan serves to establish the overall direction for the provision of visitor services; the management and protection of natural, cultural, historic, and recreational resources; and the development of all associated facilities and programs over the next ten years. The Plan is a working, dynamic document that guides the day-to-day operation of the Park, as well as serving as the basis for management decisions and actions. A more detailed discussion of the future management direction is found in chapters 2-4.

Significance Statements

Significance statements help to define the park mission by describing the importance and distinctiveness of the site's resources. The significance statements set the stage for the identification of management issues as they relate to these assets, and provide a focus for future interpretation of park resources. The statements are as follows:

1. Lewis and Clark Caverns presents a highly decorated, vertical profile cave system with mature formations, easily accessible to visitors.

2. The Caverns were designated a national monument by President Theodore Roosevelt in 1908, and named in commemoration of the Lewis and Clark expedition.

3. The Civilian Conservation Corps development of the Park in the late 1930s made the cave system easily accessible via an access road and trail system, and fulfilled requirements for the establishment of the area as a state park.

4. The land within the Park is mostly in a primitive and undeveloped state, with approximately 16 percent of the total acreage easily accessible to Park visitors (approximately 500 acres out of a total of 3,034 acres).

5. Picturesque vistas of the Jefferson River valley and nearby mountain ranges are available from the upper visitor center and along the three-mile access road.

6. The Park contains a wide variety of native plant and wildlife species, including a rare nursery colony of western big eared bats (a state-designated species of special concern), easily viewed by the public.

7. Early Native American artifacts and historical 19th century mines have been documented in various locations within the undeveloped areas of the Park.

8. The Park serves as a highly visible focal point for local, regional, statewide and--on a limited basis--international tourism.

Park Mission / 10 Year Vision

The mission statement describes in broad terms the purpose of Lewis and Clark Caverns State Park. The mission statement serves to provide a more focused direction for the identification of issues and the development of management goals and objectives.

The Lewis and Clark Caverns Mission Statement

The mission statement for Lewis and Clark Caverns State Park is as follows:

Lewis and Clark Caverns State Park provides for the preservation and protection of the underground caverns environment and above ground ecosystem, and through its interpretative programs and recreational facilities, provides visitors with the opportunity to learn about the area's unique natural and historic resources.

Ten Year Vision

"What do we want Lewis and Clark Caverns State Park to look like in ten years, and how do we get there?" This question is answered in broad terms by the following vision statement:

Within ten years, Lewis and Clark Caverns State Park will provide an expanded range of recreational opportunities, including trail and river-related activities. The experience of park visitors will be improved by focusing on quality visitor services and facilities, enhanced interpretive programs, and elevated resource protection efforts. Educational opportunities for children will be emphasized by continuing to provide educational trunks to schools throughout the state, and facilitating school group tours of the cave system and Park. Visitor satisfaction will be monitored using on-site surveys throughout the ten-year period to insure a quality experience is being provided.

The Park will increase its importance as a destination tourist attraction, encouraging visitors to stay longer and visit other attractions in the area. The rustic character of existing facilities and the Park as a whole will be maintained by concentrating new facilities within the existing developed areas of the Park. The 1930s era appearance of the facilities within the Park will be perpetuated to the greatest extent possible; design themes from this period should be integrated into any major new construction.

The Park will continue to promote a positive, cooperative, and open dialogue with adjacent landowners and local businesses on such issues as tourism, weed control, hunting, game damage, and illegal trespass. The plant ecosystem in the Park will be sustainable, with minimal impact by exotic noxious weeds. Employee and visitor safety will be primary emphasis areas. The Park will strive to keep pace with increased visitation and use by continually evaluating daily operations, staff scheduling, and concessions, making adjustments when required. Requests for increased operations and maintenance budgets and additional staffing will be based solely on maintaining and enhancing park resources and facilities, providing a quality visitor experience, and ensuring visitor and employee safety.

MANAGEMENT GOALS

Park management goals are as follows:

1. To preserve and protect the Park's unique natural, cultural, and historic resources.

2. To provide an educational experience for Park visitors which highlights the unique resources found both above and below the ground.

3. To provide a full range of non-motorized recreational opportunities, and enhance the Park's significance as a destination tourist attraction, while maintaining the desired rustic character of the Park's facilities and visitor services.

MANAGEMENT OBJECTIVES

Park management objectives are as follows:

1. Enhance the Park's significance as a destination attraction and revenue source for the state park system and surrounding community by increasing the average length of stay of visitors, while maintaining visitation within a range of 65,000 to 75,000 annually. This will be achieved by expanding the range of recreational activities and facilities to include additional hiking trails, hunting, river floating, fishing, wildlife viewing, group use, and interpretive displays on the Lewis and Clark Expedition.

Options for the existing concession operation will be reviewed when the contract is up for renewal in 2003.

2. Enhance the protection of Park resources by creating three management zones (developed, semi-developed, and primitive). All management, maintenance, operations, visitor activities, developments, and programs will be evaluated according to the conditions outlined under the following six major headings: visitor experience; access; natural resource management; facilities; cultural/historic resources; and maintenance. This will be initiated with the approval of the final plan by the Director of Montana Fish, Wildlife and Parks (FWP).

3. Improve the quality of the recreational experience of visitors by enhancing interpretive programs and facilities, including information on wildlife, plants, geology, history, hunting and fishing, historic mining activity, geography, and the Lewis and Clark Expedition. New programs could include guided nature walks, special events, and summer amphitheater shows. Cave tour enhancements will involve more structured tours for school groups, the use of educational trunks, and off-season special events, coordinated by the Parks administrative staff.

MANAGEMENT ZONING AND PRINCIPLES

Management Zoning

The management zoning concept focuses on providing a diversity of visitor recreational experiences based on the Park's mission statement, taking into account existing and proposed facilities, the location of natural, historic or cultural attributes, ease of visitor access, and required maintenance. The zones established under the management zoning concept would permit visitors to better understand what activities and services are available in different parts of the Park. In addition, management strategies outlined for each zone would guide the actions of the Park Manager and staff in maintaining the integrity of the zoning system as well as providing direction for day-to-day management and operations.

Based on the current location of existing facilities (e.g., trails, roads, utility corridors, campground, visitor center, etc.) and the location of undeveloped and primitive areas, the subsequent management zones are identified as follows:

* Developed Zone - (approximately 500 acres).
* Semi-Developed Zone - (approximately 1000 acres).
* Primitive Zone - (approximately 1500 acres). See the master-site plan map for zone locations.

Principles Common to all Management Zones

The Park will be managed in such a way as to maintain and enhance ecosystem diversity and integrity, including but not limited to the following:

1. Scenery--The scenic vistas of the Jefferson River Canyon and surrounding hills and mountains both within and outside the Park make up an important and significant resource, contributing greatly toward a quality recreational experience for Park visitors. Scenic viewsheds will be identified and protected to the extent practicable using the management zoning concept.

2. Historic and Cultural Resources--Historic and cultural resources will be identified and protected to the greatest extent possible, following all relevant State Historic Preservation Office guidelines and laws. Where appropriate, historical and cultural resources will be interpreted for Park visitors, in accordance with the conditions detailed in the Park Interpretive Plan. Consultation with the Montana Historical Society will be pursued when sharing of expertise and knowledge will enhance the preservation and interpretation of Park cultural resources.

3. Flora and Fauna--Wildlife and plant species diversity and condition will be identified and monitored to track any changes that are occurring. The sources of change will be identified, if possible, and actions taken to protect the Park's biological diversity and specific habitats such as wetlands, riparian areas, or those related to caves. An emphasis will be placed on species that are threatened, endangered, or of special concern.

4. Geological Resources--The above and below ground geologic features will be preserved and maintained in such a way as to safeguard the pristine quality of these unique resources.

5. Water/Air Quality--Water and air quality will be maintained to the highest standards possible in full accordance with local, state, and federal water and air quality laws.

6. Americans with Disabilities Act (ADA)--Accessibility for visitors with disabilities will be provided to the greatest extent possible, recognizing that access may be limited in some situations due to natural features such as those found in the cave, as well as the Park's rugged surface topography.

7. Noxious Weed Control--Extensive efforts will be made to control the establishment and spread of noxious weeds, in conjunction with the directives of the Jefferson County Weed Board and Region Three Noxious Weed Control Management Plan.

8. Recreational Experience --An emphasis will be placed on providing Park visitors with the highest quality recreational experience, including the identification and promotion of appropriate recreational activities, interpretation of major Park themes, maintaining visitor and employee safety, control of extraneous noise, mitigation of existing or potential user conflicts, and monitoring of visitor satisfaction.

9. Private Sector Support--An emphasis will be placed on developing and enhancing positive relationships with private businesses and neighboring landowners on issues such as marketing and advertising, promoting special events, and weed control. Overnight camping facilities in the Park will not be developed in such a way as to compete with private campgrounds in the area. The campground will provide basic accommodations only: Enhanced services such as electrical, water, and sewage hookups will not be provided (electricity and heat will remain available in the rental cabins). Visitors desiring such services will be directed to private campgrounds in the area.

ISSUES AND PREFERRED OPTIONS

The issues presented in the Plan and the preferred options for addressing them were developed from the public comments—as well as FWP staff and Commission input--acquired since the initiation of the planning process. Public involvement in the planning process included open house sessions, an on-site visitor survey conducted in 1994, comment on an earlier draft, and input from the Lewis and Clark Caverns Management Plan Citizens Advisory Committee. The preferred options to address the plan issues are listed below. The benefits of each preferred option are presented with a brief summary of how the preferred option will enhance the Park's natural, historic and cultural resources, recreational opportunities, visitor services, and economic activity.

Issue 1: New Trails

There is potential for developing additional trails in the Park. In the 1950s and early 1960s a series of jeep trails were constructed throughout the Park as fire breaks. These narrow roads were never maintained, but many are still clearly evident today. Some old roads would function very well as trails, requiring for the most part only minor modifications and the placement of information and direction signs. The majority of the proposed new trails would follow these existing roads. The preferred option calls for developing all potential trail routes within the developed and semi-developed management zones in the Park. The only existing designated trails in the Park are the nature trail loop in the northeast corner of the Park, and the cave tour trail, which includes the cave entrance and exit trails.

Issue 2: Trail Use

This issue concerns the types of use that will be allowed on new or existing trails in the Park. The primary trail use proposed for the Park is hiking. The preferred option would designate all new and existing Park trails as hiking only. Opportunities for providing disabled access trails or trail segments will be examined.

Allowing off-road mountain biking in the Park is not a recommendation in this Plan; however, there may be future opportunities for this type of trail use on a very limited basis. Any future mountain bike use would be examined in a separate environmental assessment, should this issue be investigated in the future. Bicycles will be permitted on Park roads.

The proposed trail system would not be adequate for horseback riding; horses on Park roads could create safety concerns and conflicts with vehicles, and therefore will not be allowed. Motorized trail use of any type will also not be permitted.

Issue 3: Lewis and Clark Expedition Bicentennial

The Lewis and Clark Bicentennial in 2003-2006 is expected to be a major drawing card for visitors over the next six years. It is anticipated that a large percentage of these visitors will be following the Lewis and Clark National Historic Trail. It is anticipated that Lewis and Clark Caverns State Park will experience increased visitation related to the bicentennial due to the Park's location on the historic trail, as well as the Park's name.

Actions to be taken by the Park to prepare for the event include the following:

A. Continue to promote and offer Lewis and Clark bicentennial-related special events such as the annual "Corks of Discovery" interpretive river float on the Jefferson River.

B. Continue to promote and offer special guest speaker presentations on the Lewis and Clark Expedition as part of the summer campfire talk program.

C. Develop and place new interpretative signs about various aspects of the expedition, focusing on events and journal entries that occurred when the expedition was in the Three Forks and lower Jefferson River area.

D. Accommodate increased visitation by actively promoting private campgrounds in the area, and lodging opportunities available in the Three Forks and Whitehall areas.

E. Continue to pursue grant opportunities to fund Lewis and Clark Bicentennial projects.

F. Continue to be actively involved in local and regional planning efforts related to the event, such as attending meetings of the following: local chambers of commerce; Lewis and Clark

Trail Heritage Foundation; Gold West Tourism Country; and state-wide interagency planning efforts.

Issue 4: Land Acquisition

Acquisition will be oriented toward inholdings and adjacent parcels that are critical to the overall integrity of Lewis and Clark Caverns State Park. Existing Department land acquisition policy calls for the Department to buy new properties only from willing sellers and to purchase land at fair market value. In addition to fee title purchases, conservation easements to protect viewsheds and other values are also an option.

The Lands Section of FWP is responsible for coordinating all land purchases within the Department. Land acquisitions are subject to approval by the FWP Commission and State Land Board. The Department has compiled a list of acquisition priorities, which is included in the full Plan. Because it is difficult to predict when and where opportunities will become available, the Department must take an opportunistic approach.

Issue 5: Campground Improvements

This issue involves possible improvements to the campground complex. The preferred option includes the placement of playground equipment within the campground/cabin complex and installation of a new amphitheater lighting system. The proposed playground equipment would be based on a theme compatible with the Park's natural and/or historic features (e.g. the Lewis and Clark Expedition). Additional trees and an expanded irrigation system are also proposed improvements for the campground.

A second phase to improvements already made to the group use area is also planned. Phase II group use area work includes the following improvements: potable water; trees; irrigation system; picnic tables; fire rings; and a group use pavilion with a barbecue, electricity, utility sink, and signing.

Issue 6: Hunting

Opening portions of the Park to big game and upland game bird hunting has been studied as part of this management planning process. The preferred option would open only the Park's primitive management zone (Park land west of Cave Mountain) for hunting, with the semi-developed and developed management zones remaining closed.

Issue 7: Cave Management

This issue includes cave tours, cave public use patterns, the recreational experience of cave tour visitors, inventories of cave biodiversity (flora and fauna), cave environmental data, visitor impacts, limits of acceptable change management, and a Park-wide geophysical inventory of cave resources, including lesser-known caves located within the Park.

Public cave tours and special off-trail use will be the only topics covered in detail in this draft of the Plan. Some of the other components of this issue, such as conducting cave resource inventories, limits of acceptable change management, and visitor use management are either currently under development or are addressed in the full management Plan. Those subjects not covered in the full Plan will be addressed in future, resource-specific management planning.

The preservation and protection of cave resources will take on increasing significance due to the need to upgrade and maintain existing resource protection and visitor service-related infrastructures within the cave system, such as handrails, lighting, and doors. Visitor services and use of the cave will be closely monitored, with changes initiated as new information becomes available on the most effective means of protecting the cave while providing for public use.

Cave Tours:

Based on public surveys and the open house meetings there are two main concerns related to the existing tour operations. First, the current maximum group size of 35 per group may to too large. Large group sizes tend to diminish the quality of the tour and often make it difficult for the tour guides to monitor their entire tour group. Second, small children (e.g., under 5 years of age) sometimes make it difficult for others in the group to enjoy their tour.

The preferred option is to reduce the maximum group size from 35 to 30. Establishing a minimum age limit was discussed during the planning process, but the decision was to not put restrictions on age at this point. Imposing age restrictions for cave tours was not selected because it would negatively impact opportunities for family groups to tour the cave.

Off Trail Cave Use:

This issue pertains to whether or not to allow special, off-trail use to areas of the cave not normally open for visitation. There exists strong interest by some members of the public for access to areas of the cavern which are not visited along the tour trail.

However, because of the physical layout of cave passageways, the fragile nature of those areas not visited by the tour trail, and safety concerns, special off-trail or "wild cave" tours to the general public will not be permitted. The preferred option will continue to allow--on a very limited basis--special off-trail use for Park staff and individuals involved in valid scientific research projects.

Staff training within the Caverns may be held infrequently to improve understanding of how the cave system relates to the study of cave and karst resources. The Department would also entertain--on a case-by-case basis--scientific and research proposals that would help further understanding of the cave resource. Speleobiological research and cave mapping would be examples of particular needs which might justify off-trail use. These proposals would not be advertised or requested, but may be permitted depending on Park research needs and the experience of the group or individual (e.g., members of the National Speleological Society or university researchers might make good candidates). An additional consideration would be the applicant's knowledge of accepted caving techniques, including use of proper equipment and familiarity with safety/rescue procedures. A written contract would be required before off-trail use would be allowed with outside individuals or groups.

Issue 8: Jefferson River Access

This issue involves the development of the Limespur Fishing Access Site (FAS) on the Jefferson River. No formal access to the river currently exists at this location. The existing primitive road and vehicle turn-around receives light to moderate use by anglers and river floaters. Access to the river currently involves crossing active railroad tracks. A safety problem exists at the present access due to limited sight distance for vehicles entering or exiting the site on to the highway.

The preferred option involves development of an improved concrete boat ramp access, with trailer and vehicle parking, a vault rest room, and interpretive displays. The new access would be located approximately 100 yards to the east of the existing primitive launch site. As recommended by FWP's Design and Construction Bureau, the current site would be closed to motorized vehicles due to the safety concerns mentioned above, and reclaimed with native vegetation.

Issue 9: Public Contact Center/Park Entrance Station

The preferred option would involve the construction of a new public contact center, including a permanent entrance station and administrative office to replace the existing A-Frame and temporary entrance station. The A-Frame information center and temporary entrance station would be removed.

There is also agreement that improvements need to be made to the Park maintenance facilities, but a specific approach has not been selected in this Plan. Options discussed during the planning process include making improvements to the existing facility, adding an improved maintenance facility at the existing maintenance site, or including a new maintenance facility near the Park entrance.

With any major new construction, an effort will be made to replicate design themes from the historic structures constructed in the Park by the Civilian Conservation Corps (CCC) in the 1930s.

Issue 10: Bighorn Sheep Reintroduction

The reintroduction of native species to Lewis and Clark Caverns State Park will produce biological, social, and economic benefits. The reintroduction of Rocky Mountain Bighorn Sheep into the Park, for example, has been proposed in the past, but no action has been taken to date. Bighorn Sheep are native to the region but have been absent from the area for much of this century. It is believed that adequate habitat exists within the Park and surrounding area to support a viable population.

Park staff and the Citizens Advisory Committee supports the future reintroduction of Bighorn Sheep into the area (London Hills ecosystem). Native species reintroduction efforts are coordinated by the Wildlife Division of FWP. Any future re-introduction proposals would be addressed in an environmental assessment developed by the FWP Wildlife Division and subject to approval by the FWP Commission.

PREFERRED MANAGEMENT PLAN ALTERNATIVE

The following summarizes the preferred options for each issue. These options collectively form the preferred management plan alternative.

Issue	Description
1) New Trails	Full development of all trail routes (utilizing some old jeep roads).
2) Trail Use	Hiking only.
3) Lewis and Clark Bicentennial	Proceed with planning and preparation.
4) Land Acquisitions	Support FWP Lands Section efforts to move forward with feasible acquisitions.
5) Campground	Playground and amphitheater lighting, new trees, expanded irrigation, phase II of the group use area.
6) Hunting	Developed and semi-developed management zones closed to all hunting; primitive zone open (rifle/shotgun/bow).
7) Cave Management	Cave Tours: Maximum group size of 30; no age limits.

Issue	Description
	Off-Trail: Very limited off-trail use for management and scientific purposes. Continue on-going planning efforts on issues such as resource inventories, limits of acceptable change management, and collecting and monitoring environmental data.
8) River Access	Close existing informal access, develop new access with parking, boat ramp, vault restroom, and interpretive displays.
9) Public Contact Center	New public center/entrance station/offices near Park entrance. Also, improve Park maintenance facilities to enhance employee health, safety, and efficiency. The intent is to protect the Park resources and visitors, while not intruding unnecessarily on the visitor or viewshed. The existing A-frame would be removed.
10) Bighorn Sheep	Park/Citizens Advisory Committee support future reintroduction; to be coordinated by FWP Wildlife Division.

IMPLEMENTATION AND TIMELINE

The issues in the Plan will be addressed according to the following general schedule. This is a tentative timeline, and is subject to change due to legislative mandates, budgetary constraints, and FWP directives and/or planning schedules.

2000-2001 biennium: trail construction; implementation of limited hunting; Lewis & Clark Bicentennial planning; acquisition of inholdings; development of limits of acceptable change (LAC) program for cave; continuation of cave environmental data collection; and completion of Phase II of the group use area improvements.

2002-2003 biennium: continuation of trail construction; placement of trees; playground equipment; expanded irrigation system and amphitheater lighting in campground; development of Limespur FAS; additional interpretive facilities for Lewis and Clark Bicentennial, Limespur FAS, and historic mining areas; replacement of hand railing in cave; continuation of cave environmental data collection and LAC planning; acquisition of additional inholdings; and modifications related to enhanced maintenance, health, and safety.

2004-2005 biennium: continuation of trail construction; continuation of cave environmental data collection and LAC planning; construction of new public contact/entrance station building; acquisition of inholdings.

PUBLIC REVIEW COMMENTS

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CHAPTER I:
INTRODUCTION AND BACKGROUND
(Draft—2/25/2000)

Lewis and Clark Caverns State Parks is one of the jewels of the Montana State Park System. The Caverns was the first state park designated in Montana, and today it remains one of the largest, most diverse, and popular units in the system, preserving natural and cultural resources of great significance. While the extensive caverns have always been the centerpiece of the Park, one of the themes in this plan is the large number of other opportunities the Park offers visitors. To a large extent, this plan is an exploration of potential which has been somewhat overlooked since the Park was designated.

Official discovery of the cave did not occur until the later years of the 19th Century, when settlers and ranchers in the area found the entrance and carefully lowered themselves into the Cavern's recesses. By the early 1900s the cave had become widely known and was designated as a national monument in 1908. Primitive guided tours were conducted from that time, but it was not until the Civilian Conservation Corps built roads, trails, and visitor facilities in the 1930s that the Caverns became generally accessible to the public on a large scale.

In 1937 the area was deeded to the State of Montana, and development since that time has been accomplished by a variety of state agencies. Between 50,000 and 60,000 visitors tour the Caverns every year; utilizing modern walkways and lighting, visitors are assisted by well-informed guides who interpret the cave's origins, speleothems, life forms, and history.

As described in more detail below, Lewis and Clark Caverns State Park has a history that has nearly as many twists and surprises as the actual caverns. Following the history, this chapter will provide a brief overview of Park geography, resources, facilities, operations, budget, staff, and visitation. Future directions for the Park our laid out in chapters 2-4.

HISTORY OF LEWIS AND CLARK CAVERNS STATE PARK

Tucked away in a draw high up a precipitous mountainside overlooking the Jefferson River Canyon, the unobtrusive entrance to Lewis and Clark Caverns belies the beauty and grandeur of one of Montana's most significant natural attractions.

For centuries, the mountain's system of interior passages, rooms, and fantastic formations was little known to humans, even though it lay less than two miles from one of the West's major corridors of exploration and transportation.

There has been some speculation as to whether Native Americans knew about the Caverns and if they might have used the cave. Prehistoric Indians were probably aware of the Caverns, but no conclusive evidence exists to indicate they penetrated into the darkened passages leading sharply

downward from the cave's natural entrance. However, there are enough legends mentioned in various newspaper accounts to suggest that Native Americans did enter the cave at some point. If these legends are combined with the knowledge that Native Americans often used caves for shelters, burial grounds, and ritualistic purposes, the possibility becomes greater that there was not only knowledge, but use of the cave to some extent.

Lewis and Clark passed through the area in 1805 and 1806 but—contrary to popular belief--were not aware of the cave that now bears their name. Lewis and Clark floated below the cave on the Jefferson River, and a small party from the expedition crossed the Cave Mountain area, but they did not discover the cave. In the decades that followed, countless fur trappers, miners, emigrants, and railroad builders made their way up and down the river, unaware of the natural wonder that lay so close at hand.

If not Lewis and Clark, then who did discover the Caverns? The most commonly accounted story is that Tom Williams and Bert Pannell discovered the cave while on a hunting trip in November 1892. As the story is related by local historians, Williams and Pannell climbed to the rock face above the entrance and scratched their initials and the date on the massive limestone wall above the entrance. They promised themselves that at some later date when they were more prepared they would return to find out the extent of the "hole in the rock."

It was six years before Tom Williams came back to find out what the Caverns had to offer. In 1898, Tom and a few friends returned with enough rope and candles to try their hand at underground exploration. They soon found themselves in an immense vertical cave passage with bats, darkness, and weird rock formations that must have both terrified and entranced them. The grand beauties of the Caverns made Williams and his friends speculate about the need to develop the Caverns so more people could see the wonders they had discovered. With this in mind, a prospector, miner, and investor named Dan Morrison, was approached with the plan of developing the Caverns.

Morrison had been prospecting in the area since the 1880's, had considerable experience with underground construction in the mines, and had capital available for investing in projects that he felt might return him a profit. Upon being told of the Caverns and shown the beauty of the crystalline formations, he was convinced of the opportunity for profit through development of the cave as a public attraction. The Caverns would never be the same.

He employed men who were working for him at his lime quarry, and invited his partners at the quarry to invest in the Cavern's development. He knew that ease of access was the key to success.

He enlarged a second entrance that had been discovered and was thereby able to avoid the first drop from the discovery hole which had been used previously. Morrison continued to publicize the Caverns as one to rival Mammoth and Wind Caves in extent and beauty. It was this publicity promoting the Caverns that would later lead to problems for Morrison.

Morrison's campaign to draw attention to the Caverns proved so effective that he attracted not only the attention of the local people, but news spread as far as St. Louis, the east coast, and even Europe. This news also reached the office of the Northern Pacific Railroad, but their interest was of a different sort.

Upon investigation, the Northern Pacific had reason to believe that the land that Morrison was claiming belonged to them. The dispute over the land continued, and it soon came to a legal contest. Morrison's position was that he had filed a claim for mineral rights to the land and was therefore the rightful owner. The railroad argued that the land had been classified as non-mineral and Morrison's claim was not valid. The necessary appeals were made and the General Land Office was charged with making the decision in the matter. The General Land Office held that the non-mineral lands adjacent to the Northern Pacific land, as given by the Act of 1864, constituted a valid and prior claim to the land. The Northern Pacific Railroad was the rightful owner.

The railroad now faced the decision of what to do with the Caverns. The Northern Pacific notified the federal government that if the Caverns could be preserved as a park, they would donate it for the purposes of creating a national monument. The federal government felt that this was a good opportunity to acquire a unique geological resource: On May 11, 1908, President Teddy Roosevelt created the twelfth national monument, and named it Lewis and Clark Cavern National Monument. This appears to be the first time that name was used for the Caverns.

The Antiquities Act had achieved its goal of preservation, but there were no appropriations accompanying the Act that could be used for further development and maintenance of the Caverns. For this reason the nearest component of the park system, Yellowstone Park, was given charge of the cave. The Department of Interior maintained that the cave should be closed to the public until there were appropriations that would allow for development, maintenance and guide services. This time would never come while the cave was under the direction of the federal park system.

Morrison was not about to give up the investment he had made, and continued to pursue the possibility of private development of the Caverns. He petitioned the government for permission to guide interested parties into the Caverns as he had done for so many years. He also asked for a permit to develop other services to make the Caverns available to the public. All of his requests were denied. The government maintained its position that the Caverns should be closed to all visitors.

Morrison, tiring of the legal battle to recoup his losses, began a program of visitation on his own. Morrison removed the lock that the government agents had placed on the gate and replaced it with one of his own. He continued to arrange tours, hire guides, and collect fees in defiance of the "non-use" position of the Park Service. The battle between the National Park Service and Morrison continued with letters from the Interior Department advising Morrison of their position of no visitation, and with the yearly ritual of the Yellowstone agents replacing the locks only to be broken by Morrison and replaced with his own new lock.

The conflict continued up to the death of Dan Morrison in 1932. At this time the federal government had begun to question the value of the Caverns as a part of the National Park System. The idea of transferring the Park to the State of Montana was pursued. Even though there were no parks to direct, the state legislature felt the need to establish the administrative framework for a future state park system.

In the fall of 1929 Rutledge Parker, the State Forester, was given the title of State Parks Director. When the federal government contacted the State of Montana in 1932 with a proposal for taking over the Caverns as its first state park, the groundwork was in place. The negotiations were underway, although at this time there was no law permitting the state to create a park or receive lands for such purposes. The state said that it would accept the Caverns, and would do what was necessary to develop the park system if the federal government could guarantee aid in the development.

The Civilian Conservation Corps (CCC) was created while these negotiations were proceeding. The CCC could provide the state with the assistance it needed in developing the Caverns, along with helping men who needed work during the Great Depression. The intent was that the development of the Caverns--which essentially had been neglected since the beginning of the century--would aid the economy of the state, and play a crucial role in the development of a Montana State Park System.

By 1935, just three years after the state was approached with the possibility of taking over the Caverns, the necessary laws had been enacted and a CCC camp (SP-3) was established at LaHood, just upstream from the Park. The result of their work is still evident in many places in the Park. On the outside they built the main access road and picnic grounds. On the saddle of the mountain they constructed the stone building that is now the visitors' center of the Caverns. At the entrance they continued the expansion of the entryway that Morrison began many years before.

Another task the CCC undertook was the exploration and mapping of the Caverns. The most notable of their explorations resulted in the discovery of the Paradise Room. It proved to be a crucial discovery. Until that time the method for viewing the cave had been similar to that employed since the first tours began in the early 1900's: begin at the entrance, descend into the Caverns, and upon reaching the area of the Brown Waterfall Room, have lunch and rest for the return trip back out the same way.

The possibility of constructing an exit tunnel to the outside was first realized with the discovery of the Paradise Room combined with the information gained from the survey and mapping of this area of the cave. In 1938 the construction of the exit tunnel began. After eighteen months and 538 feet of blasting and digging, the connection from the bottom of the Caverns to the outside was made. This provided the first opportunity for a one way trip through the Caverns.

With the exit of the CCC in 1940 and the beginning of the Second World War shortly after, the Caverns saw little further development. The State Park System was still struggling through the first stages of development, and opportunities or money to continue development were not easy

to come by. Some areas did receive attention, like the construction of connecting tunnels that eliminated the need for the spiral staircase. These tunnels were blasted and the last of the wooden stairs were removed from the Caverns.

Another development that is a significant part of the Park's history was the granting of a permit for services and concession facilities. The granting of permits such as the one given to the Link brothers, the first Park concessionaire, served to provide the services and publicity needed to make Lewis and Clark Caverns a significant tourist attraction.

For the Park, the concessions permits involved two basic services: The first Cafe-Curio Shop, operated by Louis and Ruth Link from 1946 to 1986, and the train and tram system that dates from the same period. The train and tram were operated by the state from 1950 to 1973 for the purpose of transporting visitors to and from the Caverns. Due to safety concerns, the tram was discontinued in 1973 and the train in 1975.

The years of management under FWP's Parks Division have resulted in increased benefits to the visiting public as well as the Park itself. During this time, the previous efforts of increasing public interest, developing the physical setting, and enhancing preservation efforts continued, making the Park a major attraction and one of the centerpieces of the Montana State Park System.

PARK GEOGRAPHY AND RESOURCE SUMMARY

The resources in Lewis and Clark Caverns State Park are organized around three general physical geographic features: the Jefferson River and riparian zone in the valley; the relatively flat and open benchland along the highway that includes the Park entrance, A-frame information center, and the campground; and the mountainous, partially forested terrain that encompasses the cave and visitor center (see figure 1).

The Park contains a wide array of geographical, geological, climatic and vegetative types. Despite its moderate size (3,034 acres), the boundaries of the Park stretch from an altitude of 4,200 feet at the Jefferson River Canyon to an altitude of 5,900 feet at the top of the Cave Mountain ridge. The upper parking area lies at 5,300 feet, while the cave entrance is at 5,600 feet. From the turn-off at the highway, the road to the visitor center winds 3.2 miles up the mountainside.

The nearby Tobacco Root Mountain Range and the northern extension of this range known as the London Hills (which the Park is located in) are nationally known and studied by geologists for their complicated geologic makeup. Within the boundaries of the Park can be found some of the oldest rock in North America--the Belt Supergroup basement series--which form the base of many of the great mountain ranges of the Western U.S. This Precambrian rock is dated at over two billion years old.

Numerous faults and folds have exposed this rock at elevations which are even higher than some of the more recent sedimentary deposits, such as the limestones which compose the Cave Mountain ridge, with an age of 330 million years. In the Park's lower elevations are more recent extrusive igneous material (lava), as well as very recent river gravels on the canyon floor.

Between the elevation extremes can be found a wide range of vegetative types, including the Mountain Mahogany - Juniper - Bunchgrass vegetative zone which predominates in the Park, but is rarely found elsewhere in Montana. From the sagebrush-dotted grasslands of the lower elevations to the heavily timbered north facing slopes of Douglas Fir and Limber Pine, an impressive variety of plants and animals call this Park their home. Excellent opportunities exist for wildlife observations, bird watching, and nature studies.

Animal life within the Park is characteristic of this portion of the Rocky Mountains. Mule deer, elk, and even mountain goats are found at higher elevations, while white-tailed deer, moose, and antelope can sometimes be seen closer to the river. Mountain lions, bobcats, lynx, black bear, coyotes, badgers, and porcupines have been verified in the Park, and a variety of small mammals are frequently observed. Various bat species inhabit the cave, including the western big-eared bat, which forms nursery colonies from April to September. A variety of birds, reptiles, and amphibians also reside in the Park, with brown and rainbow trout—among other fish species—in the Jefferson River.

Much more detailed inventories of the Park's resources are available, as summarized below:

Flora: The list of known vascular plants found in the Park or immediate surrounding area is included in Appendix E. This list is not complete and is updated as new species are identified.

Fauna: The list of known wildlife species found in the Park or immediate surrounding area is included in Appendix F. Similar to the flora, this list is not complete and is updated periodically (e.g., a lynx was first verified in the Park in 1999).

Soil Survey: A complete soil survey for the Lewis and Clark Caverns area was completed by the U.S Department of Agriculture, Natural Resources and Conservation Service, Whitehall Area Office in January of 1996. The report is on file at Lewis and Caverns State Park.

FACILITIES/INFRASTRUCTURE SUMMARY

Lewis and Clark Caverns State Park contains 17 buildings, over 3 miles of paved road, and 4 miles of hiking trail; a portion of the cave has been developed for foot traffic. Some of the more significant Park facilities include the following:

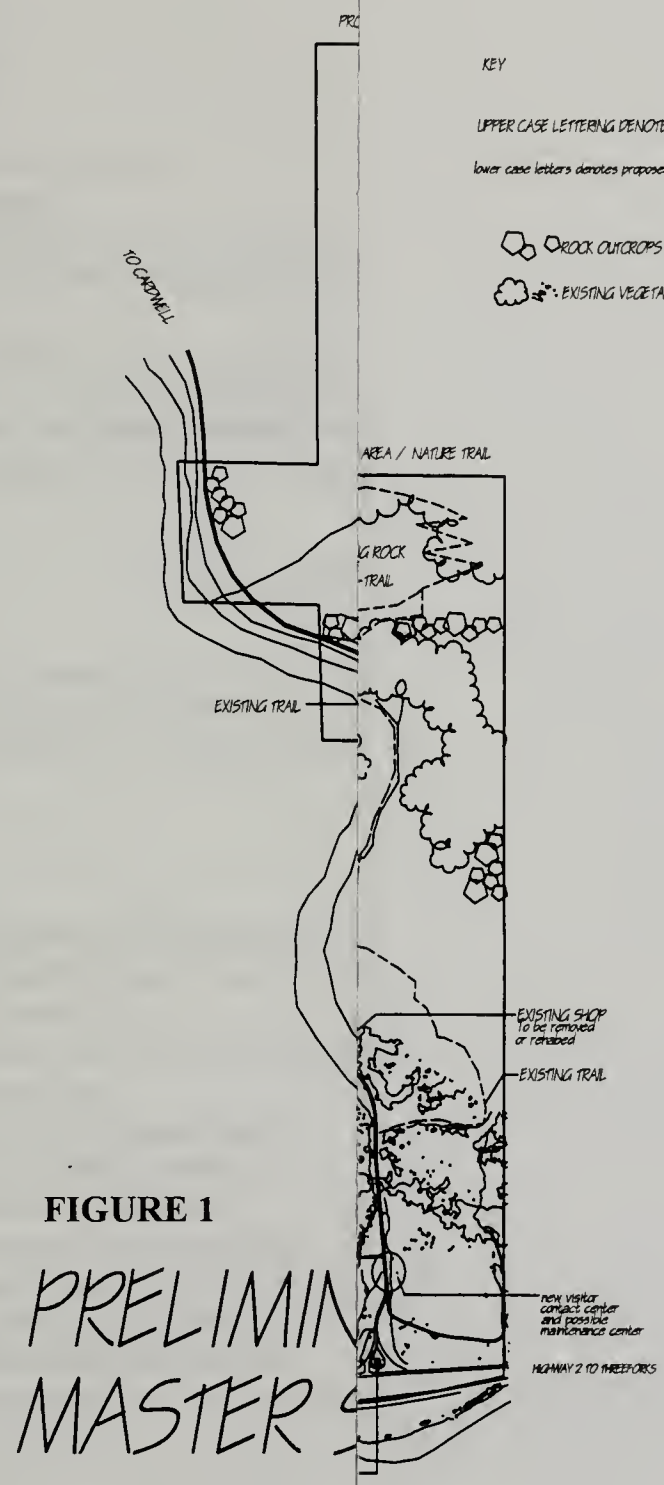

FIGURE 1

PRELIMIN
MASTER

P. VALLE 6-96	P. VALLE 10-99		RNS S. P.	SHEET: 1 of 1
DRAWN BY: DATE:	REVISED BY: DATE:	APPR		
CHECKED BY: DATE:	APPROVED BY: DATE:	APPR		

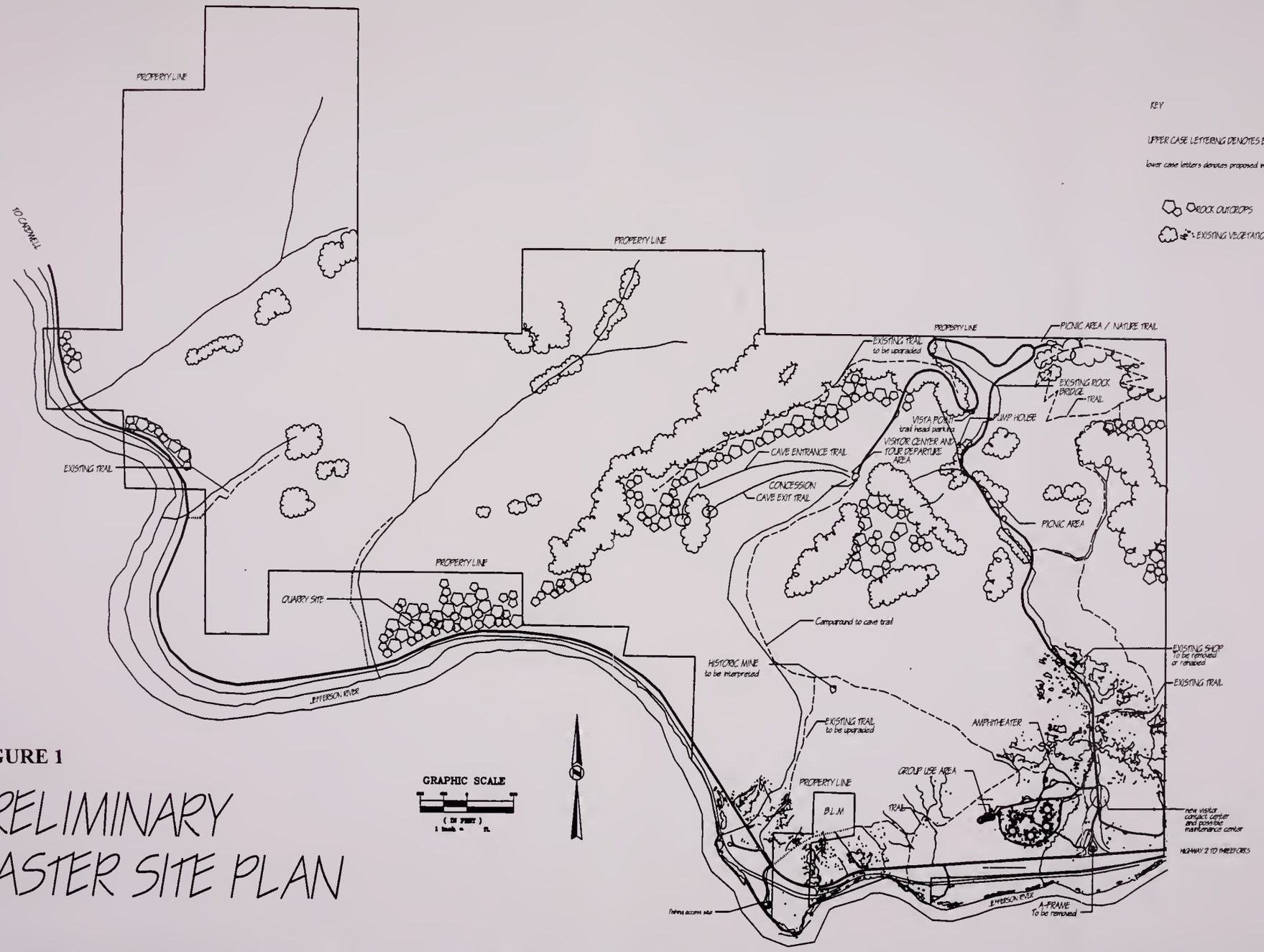

FIGURE 1

PRELIMINARY MASTER SITE PLAN

P. VALLE 6-96 DRAWN BY: DATE:	P. VALLE 10-99 REVISED BY: DATE:	APPROVED BY: DATE:	Montana Fish, Wildlife & Parks
CHECKED BY: DATE:	APPROVED BY: DATE:	APPROVED BY: DATE:	LEWIS AND CLARK CAVERNS S. P. NEAR WHITEHALL M.T.

SHEET: 1 of 1

- Park information center (i.e., the A-frame at the entrance)
- 40 site ADA accessible campground with showers, dump station, group use area
- Amphitheater
- 3 rental cabins
- Gift shop/café
- Park visitor center
- Two picnic areas
- Hiking trails
- ADA accessible public restrooms
- Three septic systems
- Two water wells, plus a spring water system
- Two miles of underground wiring, light fixtures and ½ mile of handrailing

A more complete inventory of specific facilities, structures, and buildings within the Park can be found in Appendix A. The facilities inventory format is based on numerical codes developed as part of the 1992 State Park System Attribute Inventory. The facilities information specific to Lewis and Clark Caverns State Park was last updated in February of 1996.

PARK OPERATIONS

The following is a brief summary of the monthly tasks and activities associated with park operations over the course of one calendar year. This is to provide a general understanding about the basic operation of the park on a monthly basis. The monthly priorities are not listed in priority order.

JANUARY

- Review FTE expenditures for upcoming tour season
- Contact seasonal staff to identify those wishing to return
- Identify seasonal vacancies
- Review / revise (if necessary) position descriptions
- Advertise intern positions
- End of year meeting with concessionaire
- Recruit for park hosts and volunteers
- Complete mid-year variance reports
- Complete end of year visitation summary
- Completion of candle light tours summary report
- Supervise MCC crew (if applicable)
- Organize summer campfire talk program
- Management planning/review of previous year activity/determine priorities

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FEBRUARY

- Advertise seasonal vacancies
- Review and evaluate seasonal position applications
- Schedule seasonal position interviews
- Supervise MCC crew (if applicable)
- Evaluate/revise/renew brochure summer distribution contracts
- Organize summer campfire talk programs
- Interview applicants for intern and seasonal staff positions

MARCH

- Interview applicants for intern and seasonal staff positions
- Complete work plans
- Finalize spring seasonal employee schedule
- Supervise MCC crew (if applicable)
- Final selection for new seasonals and interns
- Hiring paperwork completion

APRIL

- Turn on park water systems (end of month)
- Seasonal maintenance staff begin work
- Seasonal park staff training weekend
- Attend region 3 fee workshop (permanent staff)
- Attend Governor's conference on Tourism and Recreation (permanent staff)
- Plan brochure distribution, marketing and advertising for upcoming season.
- Conduct limited guided cave tours for school groups (special reservations only)
- Order summer season cash change funds
- Order summer supplies (e.g. paper towels, office supplies, etc.)
- Revise/submit for bid weed control contract
- Weekly safety meetings start

MAY

- Regular season camping fees begin ($12 beginning May 1)
- Park opens for general public tours (May 1)
- Participate in Wall Creek Discovery Days special event
- A-Frame information center opens (Memorial Day Weekend)
- Campground caretaker begins work
- Volunteer staff begins work
- Attend regional meeting (permanent staff)
- Initiate contracted weed control actions
- Conduct guided cave tours for school groups and general public
- Camping cabin fees increase to $39 (May 1)

- Campfire talk programs begin on Memorial Day weekend
- New seasonal staff begin work/new staff training
- Camp Company Concession opens Memorial Day weekend
- Entrance station opens, staffed by volunteers/interns (Memorial Day Weekend)
- Conduct weekly safety meetings
- Complete earned revenue remittance and deposits
- Seasonal park maintenance continues throughout summer

JUNE

- Complete fiscal year end reports
- Finalize fiscal year end purchasing
- Park hours extended on June 15
- Fiscal year-end remittances
- Attend annual regional budget meeting (permanent staff)
- New seasonal staff begin work/new staff training
- Campfire talk programs continue (Saturday evenings)
- Conduct guided cave tours for school groups and general public
- Conduct weekly safety meetings

JULY

- Conduct general public guided cave tours
- Continue with campfire talk programs
- Assist with Bannack Days special event
- New fiscal year begins
- First contingent of volunteer staff leaves
- Second contingent of volunteer staff begins work
- Conduct weekly safety meetings
- Conduct Lewis and Clark Expedition special event

AUGUST

- Complete fiscal year end project reports
- Seasonal staff layoffs begin
- Complete seasonal staff performance evaluations
- Conduct weekly safety meetings
- Conduct general public guided cave tours
- Continue with campfire talk programs

SEPTEMBER

- Hours of operation reduced (day after Labor day)
- Continue with seasonal layoffs
- Complete performance evaluations

- Second contingent of volunteer staff leaves
- A-Frame information center closes for the season (day after Labor Day)
- Campfire talk programs end (day after Labor Day)
- Camp Company Concession closes (day after Labor Day)
- Biannual Parks Division meeting (permanent staff)
- FTE planning for remainder of fiscal year
- Entrance station closes (day after Labor Day)
- Conduct fall school group tours
- Conduct general public guided cave tours
- General public cave tours end for the season (Sept. 30)

OCTOBER

- Camping cabin fees reduced to $25 (Oct. 1)
- Seasonal layoffs completed
- Seasonal performance evaluations completed
- Water systems winterized and turned off
- Camping fees reduced to off-season rates ($12 to $10 beginning Oct. 1)
- Upper park area closed to motorized vehicles for the season (Oct. 1)
- Attend biannual national cave management symposium (permanent staff)
- General big game season opens
- Conduct cave cleaning and general cave maintenance
- Winter firewood procurement
- Winterize motorized maintenance equipment
- Complete painting and building repair

NOVEMBER

- Conduct hunting related park patrols
- General hunting season closes (last week of month)
- Year end volunteer report sent to Helena
- Begin planning for candle light tours
- Cave cleaning and general cave maintenance

DECEMBER

- Attend regional meeting
- Conduct Holiday Candlelight Tours special event
- Cave cleaning
- Submit year end weed control report to regional office

ROUTINE PARK OPERATIONS (conducted year-around)

- Fee collection
- Park passport sales

- Completion of revenue deposits and remittances
- Educational trunk distribution
- Answering correspondence
- Scheduling
- Management plan evaluation/monitoring/updating
- Attend educational/training workshops
- Timerolls
- Vehicle reports
- Reservations
- Park patrols / security checks
- Facility and grounds maintenance
- Traffic counter reports
- Payment of bills
- Water quality testing
- Video sales
- Supervision
- Advertising and marketing
- Operations review
- Conduct educational presentations
- Environmental assessment and grant writing
- Attend community meetings
- Cave system environmental monitoring

STAFFING AND ORGANIZATION

There are a total of 23 paid positions at Lewis and Clark Caverns; only two of these positions are permanent (the Manager and Assistant Manager), with the other 21 being seasonal (see figure 2). In addition, the Park uses over 30 volunteers through the course of a year, with an average of over 1500 hours of volunteer labor being donated. Specific positions are as follows:

- The manager and assistant manager are responsible for the day-to-day operations, training, accounting, administration, and planning necessary to keep this large-scale operation open to park visitors.

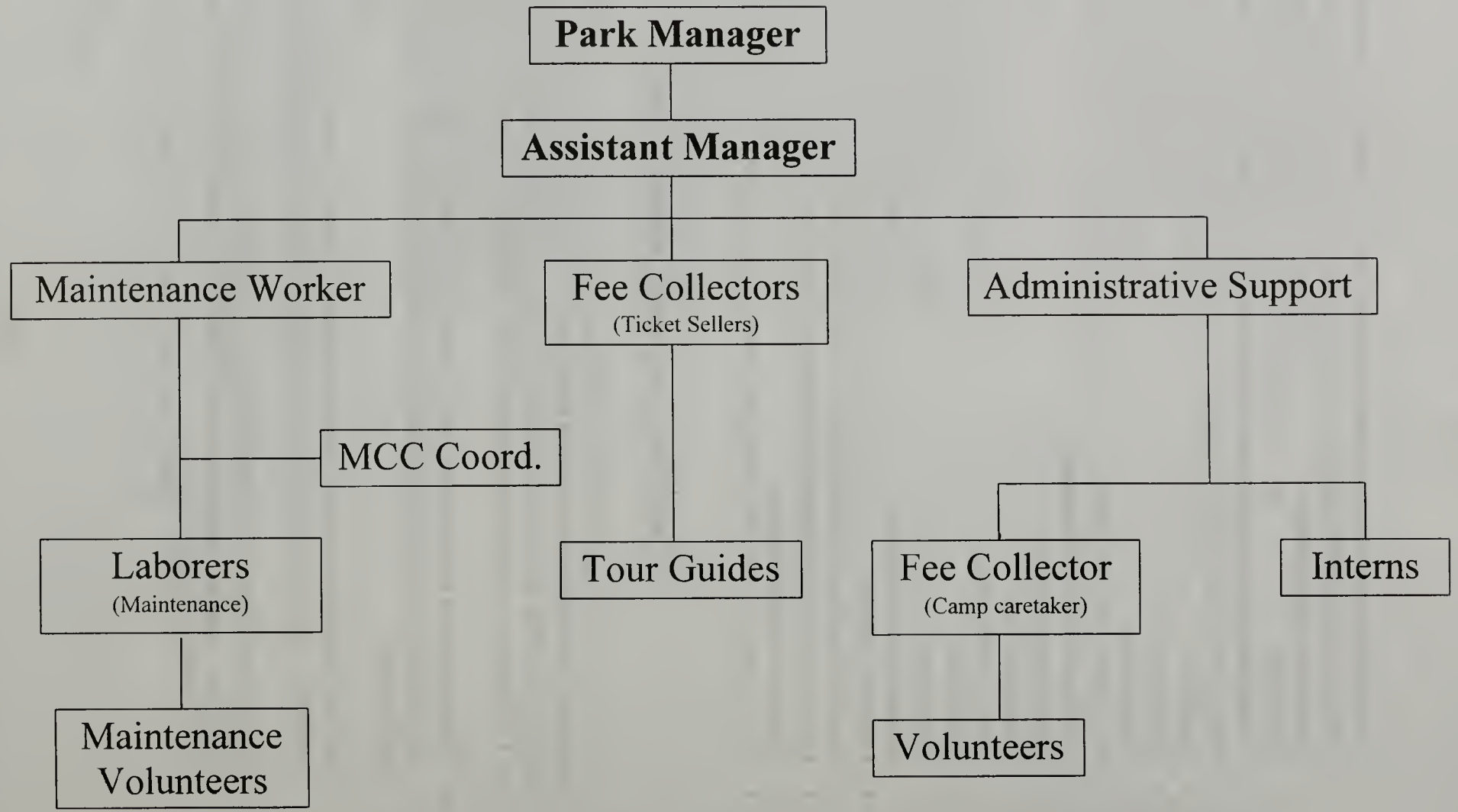
- The lead maintenance worker insures that facilities are kept in a safe, clean, and workable condition. This individual has two summer season helpers assisting with this important task.

- The information officer/administrative aid coordinates the volunteer program, the brochure distribution program, reservation systems, and school group contracts, as well as helping out with additional assigned duties.

Figure 2

Lewis & Clark Caverns

Staff Organization



- The campground attendant ensures that camping fees are collected and properly submitted, and that the campground facilities are kept in top condition.

- Three cashiers are responsible for collecting guided tour fees, daily entrance fees, and other park earned revenue. They are also responsible for accounting for the revenue, scheduling the cave guided tours, and supervising the tour guide force.

- The tour guide interpreters make up the largest contingent of the seasonal work force. Thirteen guides lead an average of 55,000 people annually through one of the most spectacular caves in the western United States. There are nine guides working daily, seven days a week in the busy summer season; each guide is responsible for three tours per day, with up to thirty people per trip. Besides interpreting the cave resource, these employees are responsible for the safety of park visitors, as well as the protection of the fragile underground environment.

- Volunteers dispense tourism information to the visitors, assist with mailings, field telephone calls, collect user fees, and work on a host of maintenance projects around the park and inside the cave.

PARK FUNDING SOURCES

Although funding sources for Lewis and Clark Caverns State Park vary slightly from year- to-year, they have remained fairly consistent over the past six years (see figure 3). Earned revenue accounts for approximately 53 percent of total budgetary needs, followed by interest earned on the Montana Coal Tax Severance Trust Fund (30 percent) and General Fund dollars (17 percent).

Additional revenue may be made available for major maintenance and emergency work on a case-by-case basis from Accommodations Tax (bed tax) dollars, which are administered by the Parks Division Office of FWP in Helena.

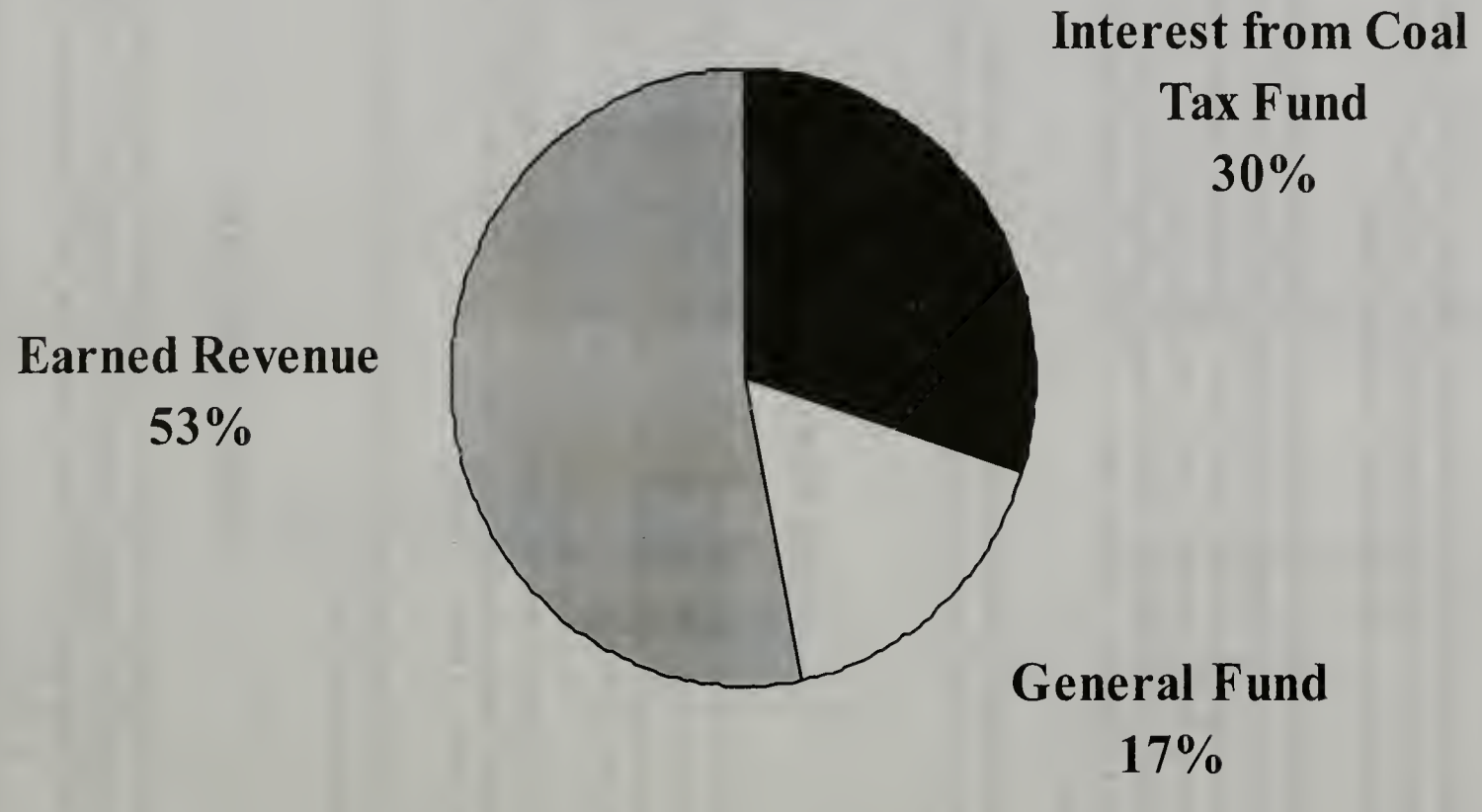
Lewis and Clark Caverns is unusual in the state park system in that it generates more revenue than is required to operate the site.

PARK VISITATION

Annual visitation at Lewis and Clark Caverns has been relatively stable over the past two decades, generally ranging between 50 and 60,000 visits (see figure 4). It is anticipated that the Lewis and Clark Bicentennial will increase visitation to the Park, perhaps significantly.

The Caverns is a heavily visited park and and an important part of the regional tourist economy, but it does not rank among the top handful in the state park system in annual visitation. The

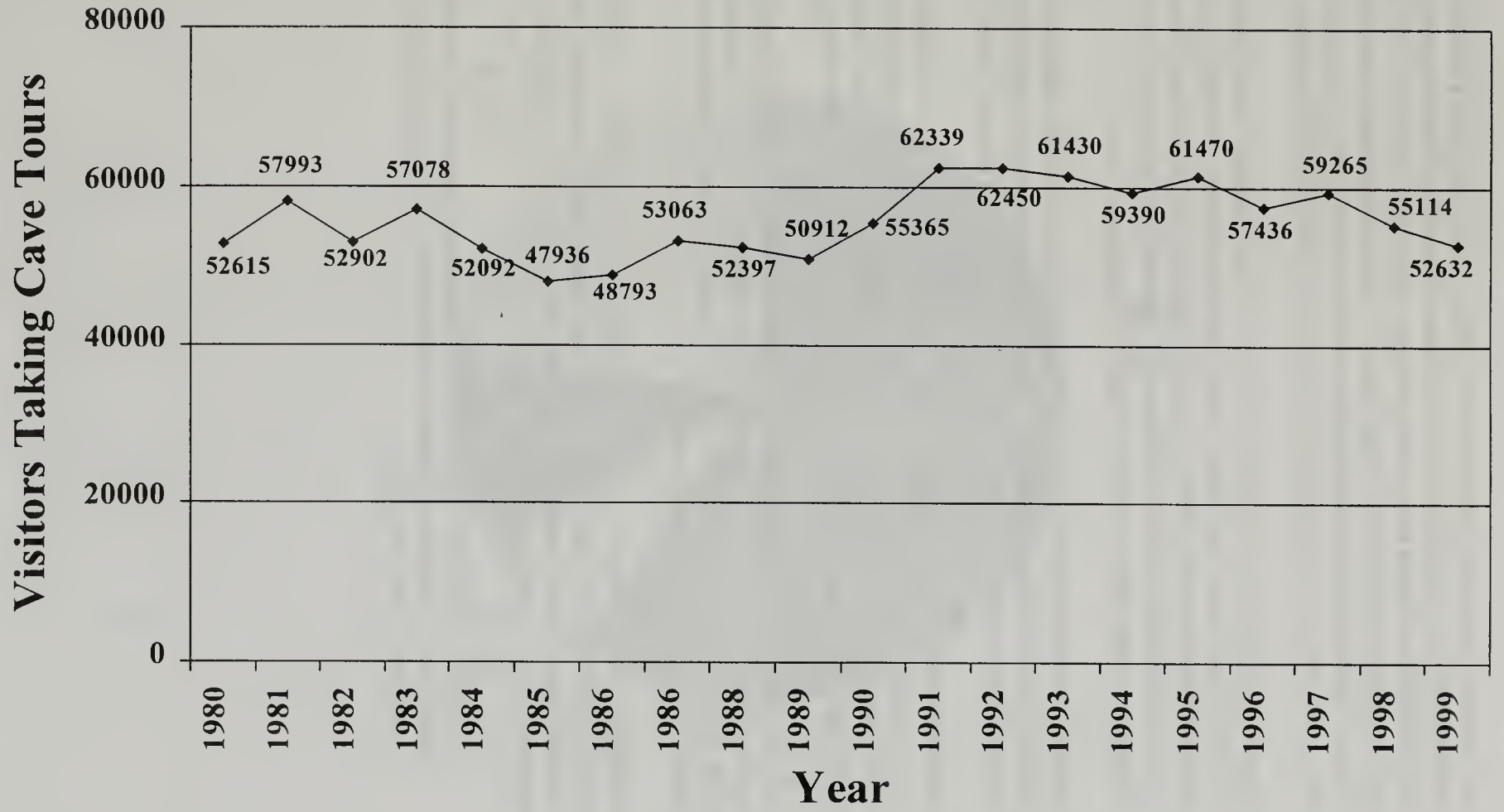
Figure 3
Funding Sources
Lewis & Clark Caverns State Park



NOTE: This has been the typical mix of funding sources for Lewis & Clark Caverns over the last 6 years.

Figure 4

Visitation Based on Cave Tour Ticket Sales



most heavily-visited state parks tend to be urban and/or water-based parks (e.g., Spring Meadow Lake, Giant Springs, Lake Elmo, Cooney Reservoir, and the Flathead system), which can easily top 100,000 visits during busy years. However, visitors to Lewis and Clark Caverns State Park tend to be highly concentrated in small areas—the upper visitor center and parking lot, the trail to the cave, the entrance area and campground, and inside the caverns themselves. Much of the Park is seldom visited; implementation of this Plan could help disperse people.

Approximately 46 percent of the visitors are Montana residents, a lower percentage than for the state park system as a whole; in the 1990s, resident visitation to Montana State Parks has averaged between 60 and 70 percent (see figure 5). Of the non-resident visitors, the most common destinations include Washington (23 percent) and California (10 percent). Canadians (Albertans, in particular) are the most frequent international visitors.

Utilization of the campground during the 1990s reflects the relative stability of the overall visitation, ranging between 2,400 and 2,800 camper unit nights annually (see figure 6). By contrast, nightly camping cabin rentals have shown a general increase since 1993 (see figure 7).

Why do people come to Lewis and Clark Caverns State Park? By far the biggest draw is the cave. It's spectacular and fairly easy to get to, for most visitors. A full 85 percent of people who visit the Park take the two-mile, two-hour guided tour through the cave. Most also take the time to have a picnic, or purchase a lunch, snack, or cold drink from the privately operated café.

Day users comprise 88 percent of the Park's visitors, on average staying less than five hours. The remaining 12 percent camp overnight, either taking the guided cave tour the evening they arrive, or the first thing the next morning, before--quite typically--being on their way toward Yellowstone or Glacier National Parks.

On-going visitor surveys over the years have shown that the majority of Park visitors have a high level of satisfaction with their experience at Lewis and Clark Caverns State Park (see Appendix G for a sample of survey results). A comment from a 1998 survey is indicative of the positive experiences most visitors have at the Caverns:

> *This park is fantastic. It astounds me! Everytime I come here I get so excited I wear myself out. The folks who run the establishment are phenomenal people, good natured and lovely (FWP, 1999).*

Figure 5

Lewis & Clark Caverns State Park Visitors: Top Seven Points of Origin

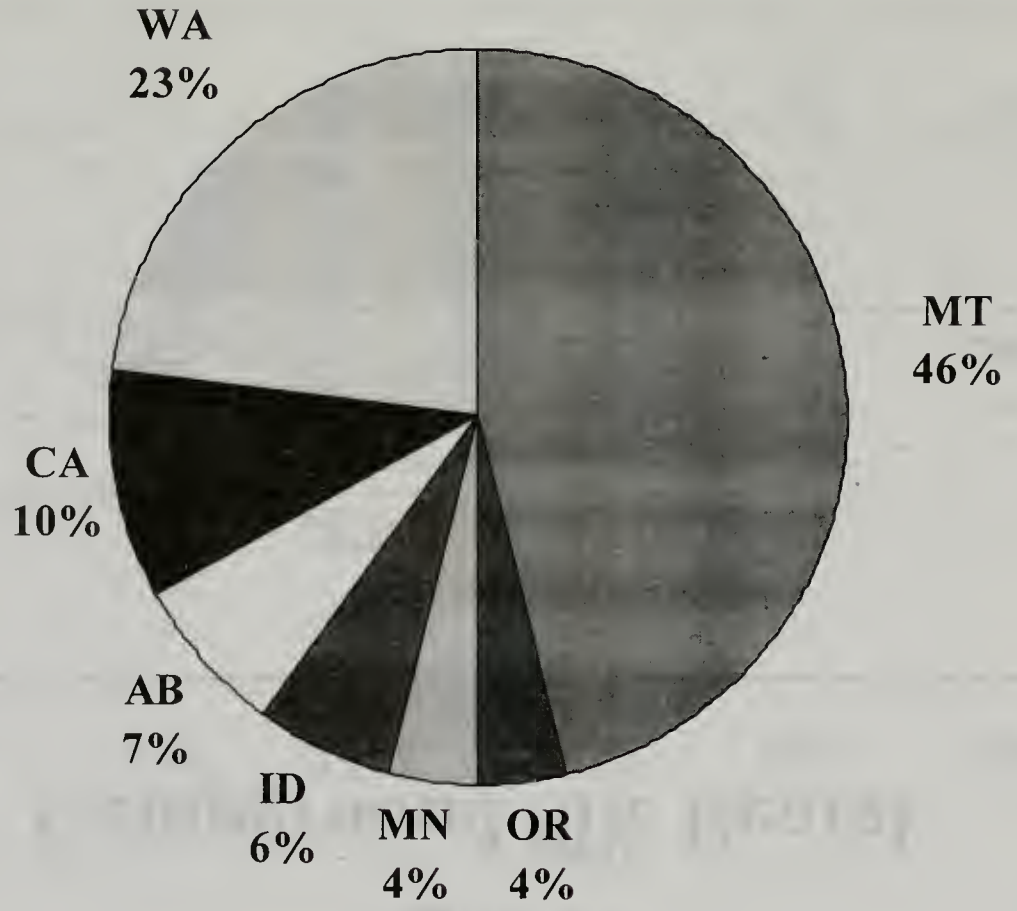


Figure 6

Campground Site Rental

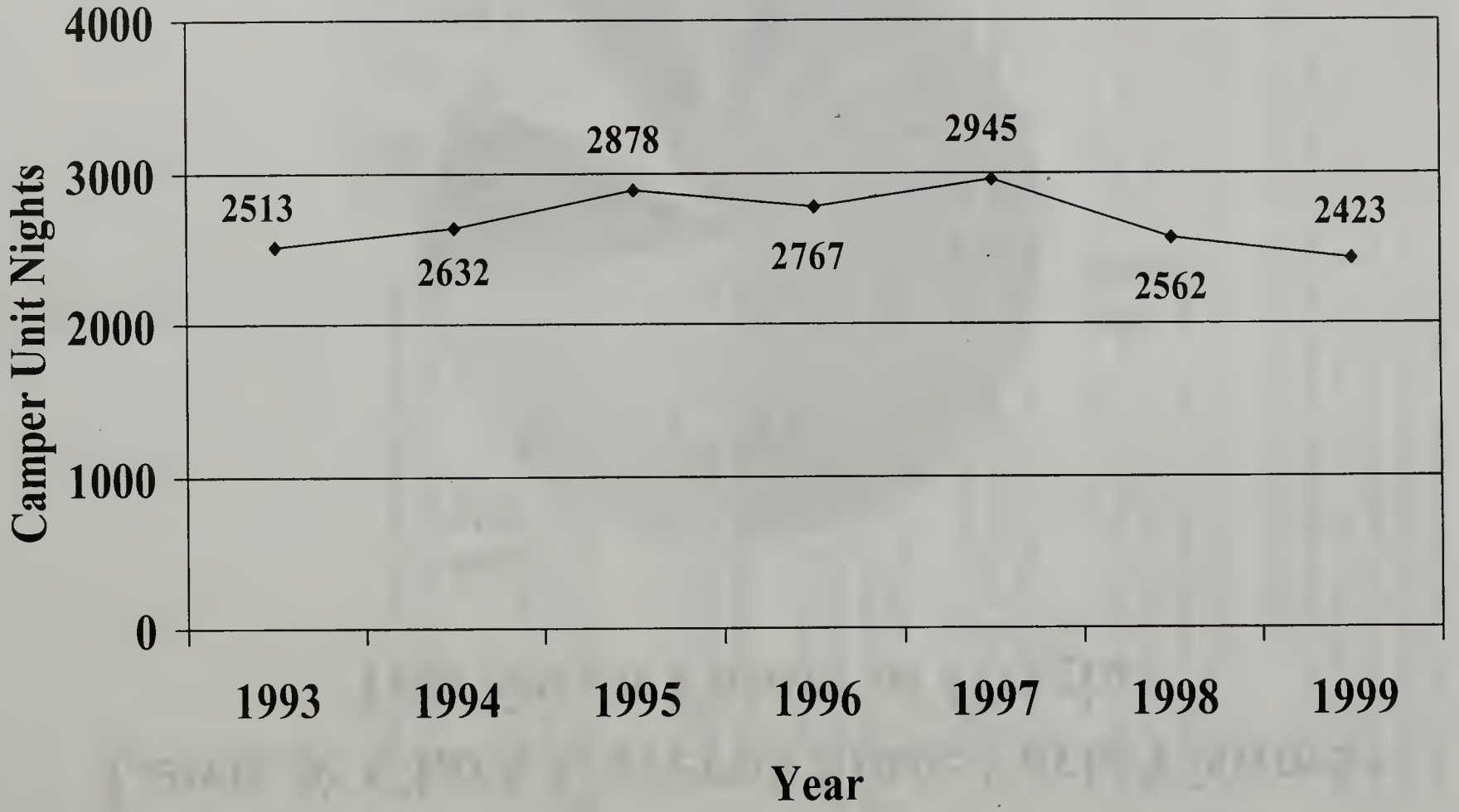
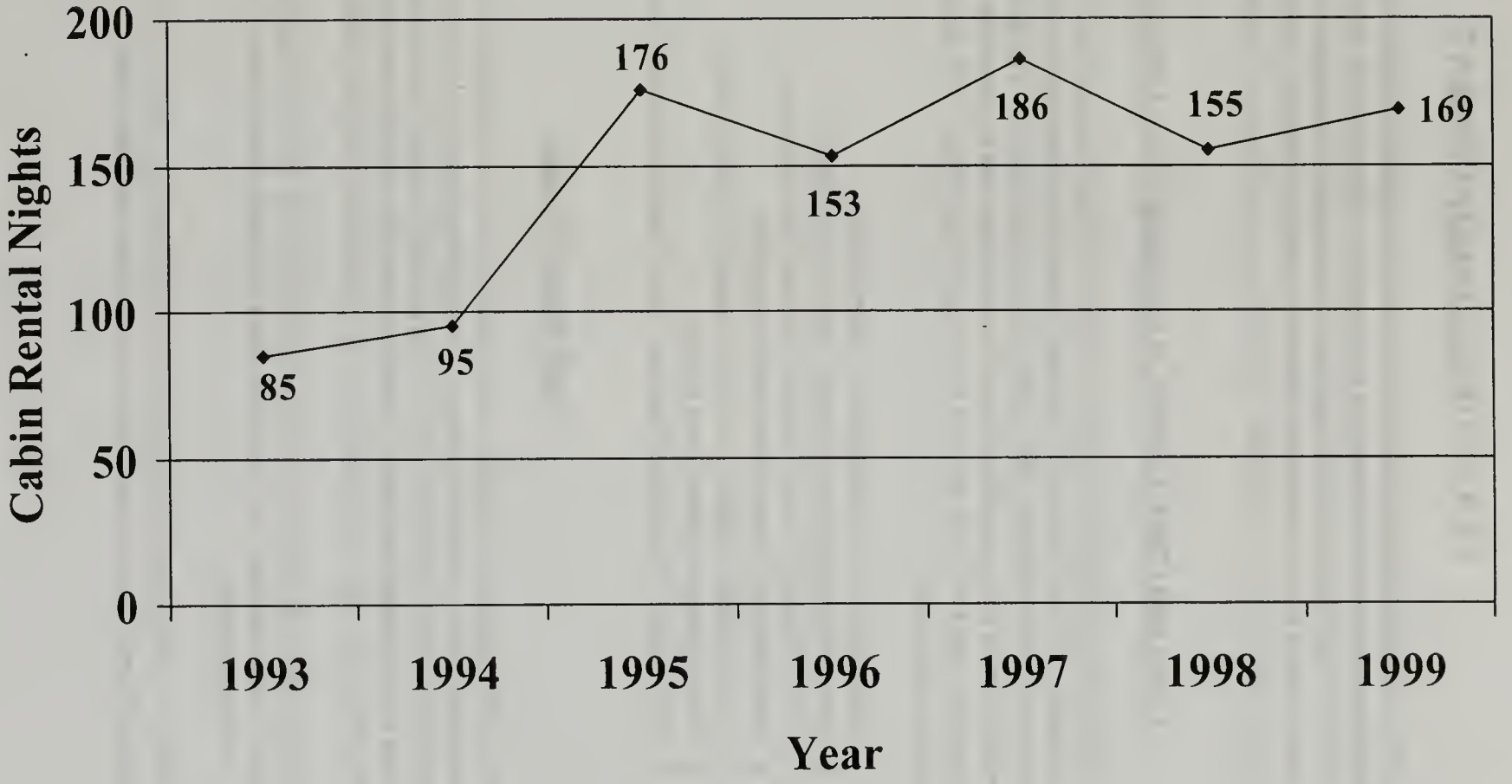


Figure 7

Camping Cabin Rentals



PLAN PUBLIC INVOLVEMENT

Staff at the Park routinely monitor public satisfaction and needs through surveys and other tools. Public involvement directly related to this planning process included input from the Citizens Advisory Committee, open house sessions, and an on-site visitor survey conducted in 1994. The issues presented in the Plan and the preferred options for addressing them were developed from the public comments and staff input acquired since the initiation of the planning process.

Lewis and Clark Caverns Management Plan Advisory Committee

A seven-person committee composed of interested citizens (mostly from the surrounding communities of Three Forks and Whitehall) played an instrumental role in reviewing existing and proposed issues and the various alternatives to address them. The Advisory Committee served to further the opportunity for public involvement and input into the Plan through a series of meetings with FWP staff involved with the planning process. The Advisory Committee members consisted of:

1. Sherry Cargill, Jefferson County Commissioner
2. Anne Ore, Magpie Books Owner, Three Forks Chamber
3. Wally Madsen, Former President, Whitehall Business Assn.
4. Mike Penfold, Montana Sate Parks Association
5. Ron Roginske, Outdoor Recreation Planner, US Forest Service
6. Gene Townsend, Three Forks Mayor
7. Pat Wherley, Three Forks Chamber, Three Forks Development Council

Open House Sessions

Three public open house meetings were scheduled as part of the public comment process for the management plan. An outline of issues, developed from previous visitor surveys, public focus group sessions, and FWP staff comment was presented at each meeting, along with possible options for addressing each point. Participants were first asked to comment on the proposed issues and to add, delete or change any or all of the issues if they so desired.

The public was then asked to select what they felt was the best way to address these issues from a list of various options. They were also asked to present other options if they did not support any of those presented.

A total of 42 people attended the three open house meetings. Of the 42 who attended the meetings, 24 provided comments on the various issues and alternatives.

Visitor Survey

Additional public input into the planning process was obtained through an on-site survey conducted in August, 1994 (see Appendix G). Two focus group sessions were also conducted as part of an earlier tourism and marketing plan for the Park. Relevant survey results are summarized in the chapter addressing issues and preferred options.

CHAPTER II:
PARK MANAGEMENT DIRECTION
(Draft—2/25/2000)

This chapter lays out the current mission of the Park, the vision for the site ten years into the future, goals and objectives, management zoning, and future staffing proposals.

As a foundation for what follows, the importance and distinctiveness of the Park's resources and history are summarized by "significance statements," which in turn help to define the Park's mission. The significance statements below set the stage for the identification of management issues, and provide a focus for future interpretation of Park resources.

SIGNIFICANCE STATEMENTS

The significance statements developed for the Park are as follows:

1. Lewis and Clark Caverns presents a highly decorated, vertical profile cave system with mature formations, easily accessible to visitors.

2. The Caverns were designated a national monument by President Theodore Roosevelt in 1908, and named in commemoration of the Lewis and Clark expedition.

3. The Civilian Conservation Corps development of the Park in the late 1930s made the cave system easily accessible via an access road and trail system, and fulfilled requirements for the establishment of the area as a state park.

4. The land within the Park is mostly in a primitive and undeveloped state, with approximately 16 percent of the total acreage easily accessible to Park visitors (approximately 500 acres out of a total of 3,034 acres).

5. Picturesque vistas of the Jefferson River valley and nearby mountain ranges are available from the upper visitor center and along the three-mile access road.

6. The Park contains a wide variety of native plant and wildlife species, including a rare nursery colony of western big eared bats (a state-designated species of special concern), easily viewed by the public.

7. Early Native American artifacts and historical 19th century mines have been documented in various locations within the undeveloped areas of the Park.

8. The Park serves as a highly visible focal point for local, regional, statewide and--on a limited basis--international tourism.

PARK MISSION/10 YEAR VISION

The mission statement describes in broad terms the purpose of Lewis and Clark Caverns State Park. The mission statement serves to provide a more focused direction for the identification of issues and the development of management goals and objectives.

The Lewis and Clark Caverns Mission Statement

The mission statement for Lewis and Clark Caverns State Park is as follows:

> *Lewis and Clark Caverns State Park provides for the preservation and protection of the underground caverns environment and above ground ecosystem, and through its interpretative programs and recreational facilities, provides visitors with the opportunity to learn about the area's unique natural and historic resources.*

Ten Year Vision

"What do we want Lewis and Clark Caverns State Park to look like in ten years, and how do we get there?" This question is answered in broad terms by the following vision statement:

> *Within ten years, Lewis and Clark Caverns State Park will provide an expanded range of recreational opportunities, including trail and river-related activities. The experience of Park visitors will be improved by focusing on quality visitor services and facilities, enhanced interpretive programs, and elevated resource protection efforts. Educational opportunities for children will be emphasized by continuing to provide educational trunks to schools throughout the state, and facilitating school group tours of the cave system and Park. Visitor satisfaction will be monitored using on-site surveys throughout the ten-year period to insure a quality experience is being provided.*
>
> *The Park will increase its importance as a destination tourist attraction, encouraging visitors to stay longer and visit other attractions in the area. The rustic character of existing facilities and the Park as a whole will be maintained by concentrating new facilities within the existing developed areas of the Park. The 1930s era appearance of the facilities within the Park will be perpetuated to the greatest extent possible; design themes from this period should be integrated into any major new construction.*

The Park will continue to promote a positive, cooperative, and open dialogue with adjacent landowners and local businesses on such issues as tourism, weed control, hunting, game damage, and illegal trespass. The plant ecosystem in the Park will be sustainable, with minimal impact by exotic noxious weeds. Employee and visitor safety will be primary emphasis areas. The Park will strive to keep pace with increased visitation and use by continually evaluating daily operations, staff scheduling, and concessions, making adjustments when required. Requests for increased operations and maintenance budgets and additional staffing will be based solely on maintaining and enhancing Park resources and facilities, providing a quality visitor experience, and ensuring visitor and employee safety.

MANAGEMENT GOALS

Park management goals are as follows:

1. To preserve and protect the Park's unique natural, cultural, and historic resources.

2. To provide an educational experience for Park visitors which highlights the unique resources found both above and below the ground.

3. To provide a full range of non-motorized recreational opportunities, and enhance the Park's significance as a destination tourist attraction, while maintaining the desired rustic character of the Park's facilities and visitor services.

These goals are consistent with the long-term direction outlined in 2020 Vision for Montana State Parks, the strategic plan developed for the entire park system (FWP, 1998).

MANAGEMENT OBJECTIVES

Park management objectives are as follows:

1. Enhance the Park's significance as a destination attraction and revenue source for the state park system and surrounding community by increasing the average length of stay of visitors, while maintaining visitation within a range of 65,000 to 75,000 annually. This will be achieved by expanding the range of recreational activities and facilities to include additional hiking trails, hunting, river floating, fishing, wildlife viewing, group use, and interpretive displays on the Lewis and Clark Expedition. Options for the existing concession operation will be reviewed when the contract is up for renewal in 2003.

2. Enhance the protection of Park resources by creating three management zones (developed, semi-developed, and primitive). All management, maintenance, operations, visitor activities, developments, and programs will be evaluated according to the conditions outlined under the following six major headings: visitor experience; access; natural resource management; facilities; cultural/historic resources; and maintenance. This will be initiated with the approval of the final Plan by the Director of Montana Fish, Wildlife and Parks (FWP).

3. Improve the quality of the recreational experience of visitors by enhancing interpretive programs and facilities, including information on wildlife, plants, geology, history, hunting and fishing, historic mining activity, geography, and the Lewis and Clark Expedition. New programs could include guided nature walks, special events, and summer amphitheater shows. Cave tour enhancements will involve more structured tours for school groups, the use of educational trunks, and off-season special events, coordinated by the Parks administrative staff.

MANAGEMENT ZONING AND PRINCIPLES

Management Zoning

The management zoning concept focuses on providing a diversity of visitor recreational experiences based on the Park's mission statement, taking into account existing and proposed facilities, the location of natural, historic or cultural attributes, ease of visitor access, and required maintenance. The zones established under the management zoning concept would permit visitors to better understand what activities and services are available in different parts of the Park. In addition, management strategies outlined for each zone would guide the actions of the Park Manager and staff in maintaining the integrity of the zoning system as well as providing direction for day-to-day management and operations.

Based on the current location of existing facilities (e.g., trails, roads, utility corridors, campground, visitor center, etc.) and the location of undeveloped and primitive areas, the subsequent management zones are identified as follows (see figure 8):

* Developed Zone - (approximately 500 acres).
* Semi-Developed Zone - (approximately 1000 acres).
* Primitive Zone - (approximately 1500 acres). See the master-site plan map for zone locations.

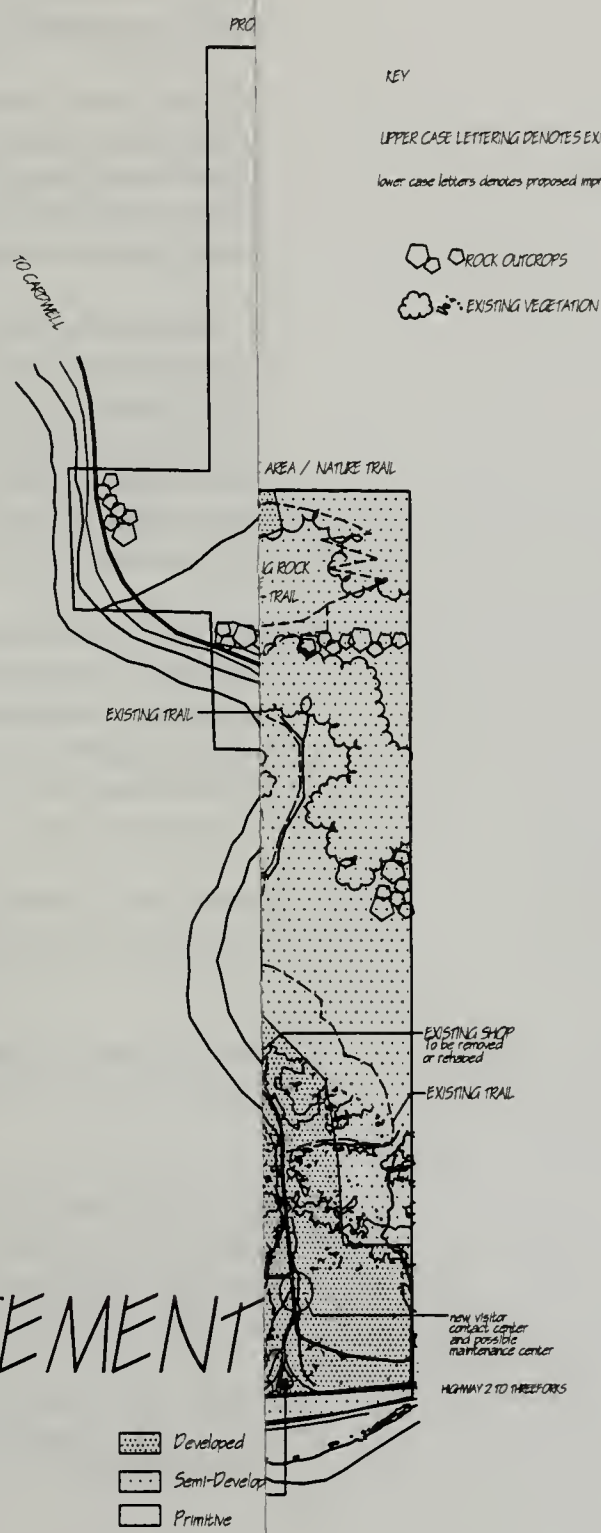


FIGURE 8

MANAGEMENT

P. VALLE	6-95	P. VALLE	10-99	RNS S. P.	SHEET: 1 of 1
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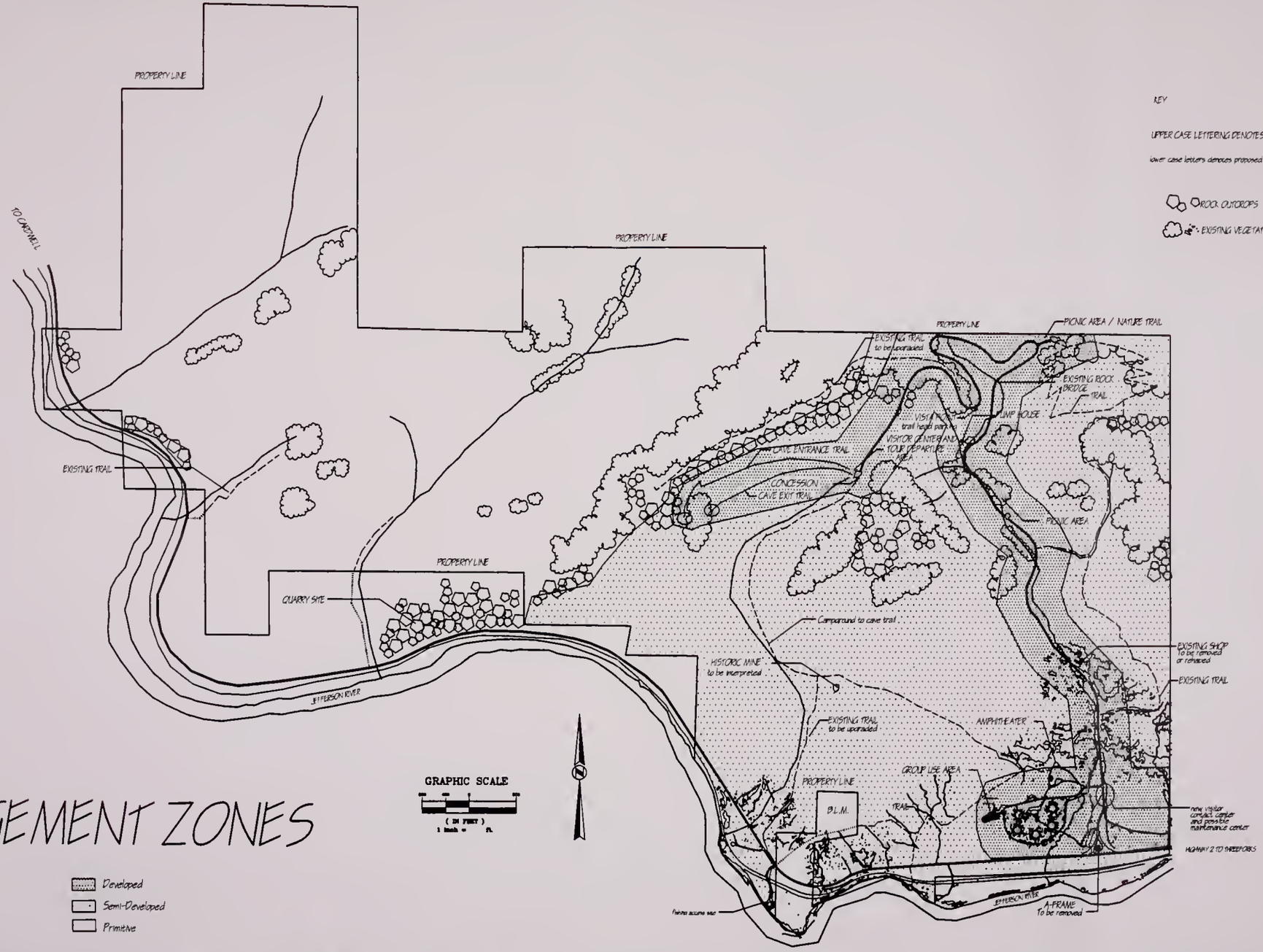

FIGURE 8

MANAGEMENT ZONES

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CHECKED BY: DATE:	APPROVED BY: DATE:	APPROVED BY: DATE:	LEWIS AND CLARK CAVERNS S. P. NEAR WHITEHALL M.T.

SHEET: 1 of 1

Principles Common to all Management Zones

The Park will be managed in such a way as to maintain and enhance ecosystem diversity and integrity, including but not limited to the following:

1. **Scenery**--The scenic vistas of the Jefferson River Canyon and surrounding hills and mountains both within and outside the Park make up an important and significant resource, contributing greatly toward a quality recreational experience for Park visitors. Scenic viewsheds will be identified and protected to the extent practicable using the management zoning concept.

2. **Historic and Cultural Resources**--Historic and cultural resources will be identified and protected to the greatest extent possible, following all relevant State Historic Preservation Office guidelines and laws. Where appropriate, historical and cultural resources will be interpreted for Park visitors, in accordance with the conditions detailed in the Park Interpretive Plan. Consultation with the Montana Historical Society will be pursued when sharing of expertise and knowledge will enhance the preservation and interpretation of Park cultural resources.

3. **Flora and Fauna**--Wildlife and plant species diversity and condition will be identified and monitored to track any changes that are occurring. The sources of change will be identified, if possible, and actions taken to protect the Park's biological diversity and specific habitats such as wetlands, riparian areas, or those related to caves. An emphasis will be placed on species that are threatened, endangered, or of special concern.

4. **Geological Resources**--The above and below ground geologic features will be preserved and maintained in such a way as to safeguard the pristine quality of these unique resources.

5. **Water/Air Quality**--Water and air quality will be maintained to the highest standards possible in full accordance with local, state, and federal water and air quality laws.

6. **Americans with Disabilities Act (ADA)**--Accessibility for visitors with disabilities will be provided to the greatest extent possible, recognizing that access may be limited in some situations due to natural features such as those found in the cave, as well as the Park's rugged surface topography.

7. **Noxious Weed Control**--Extensive efforts will be made to control the establishment and spread of noxious weeds, in conjunction with the directives of the Jefferson County Weed Board and Region Three Noxious Weed Control Management Plan.

Principles Common to all Management Zones

The Park will be managed in such a way as to maintain and enhance ecosystem diversity and integrity, including but not limited to the following:

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7. **Noxious Weed Control**--Extensive efforts will be made to control the establishment and spread of noxious weeds, in conjunction with the directives of the Jefferson County Weed Board and Region Three Noxious Weed Control Management Plan.

8. **Recreational Experience** --An emphasis will be placed on providing Park visitors with the highest quality recreational experience, including the identification and promotion of appropriate recreational activities, interpretation of major Park themes, maintaining visitor and employee safety, control of extraneous noise, mitigation of existing or potential user conflicts, and monitoring of visitor satisfaction.

9. **Private Sector Support**--An emphasis will be placed on developing and enhancing positive relationships with private businesses and neighboring landowners on issues such as marketing and advertising, promoting special events, and weed control. Overnight camping facilities in the Park will not be developed in such a way as to compete with private campgrounds in the area. The campground will provide basic accommodations only: Enhanced services such as electrical, water, and sewage hookups will not be provided (electricity and heat will remain available in the rental cabins). Visitors desiring such services will be directed to private campgrounds in the area.

Developed Management Zone

This zone would include all major Park developments required to serve visitors and meet the needs of management. The developed management zone is approximately 500 acres in size, and encompasses areas where Park development and/or intensive use has substantially altered the natural environment. It is defined as follows:

> *The area within 500 feet of the centerline of the paved access road, 500 feet from the edge of paved parking lots, and 1000 feet from the perimeter of the paved campground loop road. This zone also includes the trails connecting Lewis and Clark Caverns and the upper visitor center, as well as the trail and related improvements within the cave system itself.*

The developed zone would accommodate the highest levels of use in the Park. Activities would be fairly structured and involve little challenge for most visitors. Support facilities and services would be extensive. Visitor contacts with Park staff would be frequent during the main use season. There would be little or no opportunity for solitude during the main use season (May to September), with increasing opportunity during the off-season months (October to April). Relatively intensive resource management and maintenance activity would be required to mitigate impacts associated with high levels of visitor use and development. Although natural processes would be perpetuated wherever possible, major alterations and intrusions would be clearly evident. American with Disabilities Act (ADA) standards would be highly emphasized when possible within this zone.

More specific details about the developed zone follow below:

1. Visitor Experience

The developed zone would provide the initial experience for visitors to Lewis and Clark Caverns, introducing them to most of the Park's significant resources and presenting the primary Park interpretive themes. Interpretive exhibits, video presentations, naturalist programs (including guided cave tours), slide shows, and educational publications would be used to convey an understanding of what the Park encompasses. Orientation and information would also be provided to assist visitors in planning their stay in the Park and surrounding region. Picnic and camping opportunities would be available. Concessionaire services would also be available for food and gift items on a seasonal basis.

2. Access

Access would be unimpeded for daylight hours during the main use season (May to September). This zone would contain all paved roads, picnic, camping and parking areas, and would be accessible by ordinary passenger vehicles, with the exception of the cave. Off-road motorized vehicle use would be prohibited. Pedestrian access would be along well-defined walkways. The walkways would accommodate the highest volume of foot traffic within the Park. Generally these walkways would be short access routes within the campground and cabin areas and/or would direct visitors to and from major interpretive displays and service facilities, such as the cave, adjacent to the principle access roads and paved parking lots. Access for persons with disabilities would be provided in compliance with Americans with Disabilities Act (ADA) standards.

Off-season access (October to April) would be dependent on road and/or weather conditions. The campground would remain open year-around. The main Park access road to the upper visitor center would be closed from October 1 to April 30. Access to the upper Park area would be limited to hiking or bicycles (paved road only) during this time.

3. Natural Resource Management

The natural character of the lands within this zone would be maintained while accommodating high levels of visitor use. Native plant species would be used as much as possible for all revegetation projects. Landscaping, mowing, and tree pruning would be intensive and carried out in appropriate areas to insure visitor safety and maintain the esthetic quality of the area. Undesirable non-native plant species such as knapweed, dandelion and cheatgrass would be controlled in accordance with the Region 3 Noxious Weed Management Plan and the Lewis and Clark Caverns Weed Control Action Plan (assuming the control measures are deemed feasible, and would not result in significant damage to native plant species, wildlife or negatively affect visitor or employee safety).

Watchable wildlife programs and wildlife viewing opportunities would be promoted to the greatest extent possible by active habitat protection and enhancement. When possible, mitigation

efforts would be carried out in areas where habitat disturbances occur due to high levels of visitor use and/or new or expanded developments. Along with intense visitor use, the substantial alterations and impacts to the natural environment may preclude the reintroduction of native wildlife species within this management zone. Wildlife management actions such as hunting would not be permitted.

Wildfires occurring within this zone would be contained and extinguished without delay to protect facilities and ensure visitor and employee safety.

4. Facilities

New buildings and major facility developments would occur exclusively within this zone. New structures would be designed and located to blend harmoniously with the natural environment and existing structures as much as possible. Existing and potential modifications might include visitor support services such as buildings; surfaced parking lots and roads; group use facilities; water and sewage systems; phone and power systems; and related facilities. Significant site modifications could be used to improve visitor traffic patterns, safety, service conditions and accessibility.

5. Cultural/Historic Resource Management

Emphasis for cultural and historic resource management within the developed zone would be on enhanced protection and interpretation. Due to high visitor use levels, structures currently on or candidates for inclusion to the National Register of Historic Places would be maintained, managed, utilized and/or modified in a manner consistent with Montana State Historic Preservation Office (SHPO) mandates. Identified sensitive areas containing archeological, cultural or historic resources would be protected according to SHPO guidelines. Interpretation of resources found both within and outside the developed management zone would be provided at appropriate locations. The purpose would be to give visitors a detailed perspective of the significance of cultural and historic resources found within the Park.

6. Maintenance

This would involve maintaining existing facilities (cleaning, painting, patching, striping, litter control, garbage collection, vandalism repair etc.); hardening sites; landscaping; providing for visitor convenience; comfort and safety; and protecting resources and restoring areas impacted by human activity.

Maintenance would be intensive within this zone, occurring on a regularly scheduled basis according to the Park maintenance management guidelines. Power tools and heavy equipment would be used extensively for routine and specialized maintenance activities when required. An emphasis would be placed on regularly scheduled inspections of all facilities, structures, tools and equipment to ensure the highest level of visitor and employee safety. Environmental conditions (i.e. water quality, hazard tree identification, etc.) would be closely monitored in

accordance with Park maintenance management guidelines, Department and Division policies, and applicable laws.

Semi-Developed Management Zone

The semi-developed zone is defined as all areas outside the developed zone, extending from the eastern boundary of the Park to the ridge of Cave Mountain. It also includes those areas within Lewis and Clark Caverns which lie immediately adjacent to the cave trail, or have been altered for historical tour trail routes or by past trail construction projects. The semi-developed zone encompasses approximately 1,000 acres.

The semi-developed zone would accommodate high to moderate visitor use, with the exception of portions of the cave interior. Visitor use in this zone would be seasonally dependent, with potentially high use from May 1 to September 30 and lower use outside of this time period. With the exception of nature trail and cave interpretive programs, visitor activities would be mostly unstructured, involving a greater degree of challenge.

Support facilities and services would be limited to trail information and interpretive signs, primitive rest rooms, and various safety and resource-related protection devices (i.e. mine shaft gates preventing entry, fences, erosion control structures, etc.) Visitor contacts with Park staff would be less frequent than in the developed zone, with most contacts occurring during the May 1 to September 30 time period. In some instances there would be substantial opportunities for solitude. Resource management and maintenance activities would be less apparent, essentially limited to necessary noxious weed control and trail, fencing, safety and/or resource protection facility inspections and maintenance. Natural processes would predominate, with human-related alterations and intrusions less evident. ADA standards would be met when feasible but would be less evident due to the lack of substantial visitor facilities or developments and the more natural, rustic character of the area.

1. Visitor Experience

In the semi-developed zone there would be a greater sense of remoteness and solitude. Visitors would be able to access the undeveloped, primitive areas of the Park from various trails. Interpretive and education related facilities would be limited to low profile signs and exhibit panels. Limited interpretation of Park themes would be provided at selected locations, along with necessary information concerning the protection of Park resources, Park rules and regulations, and visitor safety.

2. Access

Access would be easy to moderately difficult depending on weather, trail, and seasonal conditions. This zone would contain all gravel roads and the majority of Park trails. Off-road motorized vehicle use would be prohibited. Trails for hikers would originate in this zone.

Access would be along well-marked trails. Widths and grades of these trails would vary depending on conditions. Access for persons with disabilities would be provided when feasible but would be limited due to natural conditions. Off-season access (October 1 to April 30) would be dependent on road and/or weather conditions.

3. Natural Resource Management

The natural character of the lands within this zone would be essentially unaltered, with the presence of gravel roads, trails, vault rest rooms, fences, low profile interpretive and information signs and the power line corridor being the only clearly visible intrusions. Native plant species would be used for all revegetation projects. Landscaping, mowing, and tree pruning would be limited and conducted only for visitor safety or resource protection purposes. Undesirable non-native plant species such as knapweed, dandelion and cheatgrass would be controlled if necessary (if such control measures are deemed feasible and would not result in significant damage to native plant species, wildlife or negatively affect visitor or employee safety).

Wildlife viewing opportunities would be substantially higher in this zone and promoted to the greatest extent possible. Mitigation efforts would be carried out in areas where habitat disturbances occur due to visitor use and/or natural system alterations. The reintroduction of native wildlife species could take place within this management zone. Hunting would not be permitted due to the potential for conflicts with different types of user groups.

Wildfires occurring within this zone would be contained and extinguished as soon as possible to protect Park resources and to ensure visitor and employee safety.

4. Facilities

Only limited development would be provided within this zone. Gravel and unimproved primitive dirt roads, low-profile interpretive panels and information signs, jack leg and wire fences, unstaffed interpretive kiosks, trailheads, hiking trails, and vault rest rooms could be provided.

5. Cultural/Historic Resource Management

Emphasis for cultural and historic management within the semi-developed zone would be on identification, enhanced protection, and interpretation of these resources. Structures currently on or candidates for inclusion to the National Register of Historic Places would be protected and maintained in a manner consistent with Montana State Historic Preservation Office (SHPO) mandates. Identified sensitive areas containing archeological, cultural or historic resources would be protected to the greatest extent possible according to SHPO guidelines.

6. Maintenance

Activities would include maintaining roads and facilities (cleaning, painting, repair, pump out, etc.), hardening sites when necessary, ensuring visitor comfort and safety, protecting resources, and restoring areas disturbed by human activities. Trailhead-related structures, fences, trails,

water, power, communication and septic systems, and interpretive displays would also require routine maintenance. Maintenance would be less intrusive within this zone, occurring on a regularly scheduled basis or as needed. Specific maintenance schedules will be provided in detail in the maintenance management guidelines.

Power tools could be used for routine and specialized maintenance activities when required. Heavy equipment could be utilized when visitation is low or when conditions would not endanger resources, visitor safety or access.

An emphasis would be placed on annual inspections of all facilities, structures and resources to ensure a high level of visitor and employee safety is sustained and that all standards are met. Environmental conditions (i.e. water quality, hazard tree identification, etc.) would be monitored annually in accordance with Park maintenance management guidelines, Department and Division policies and applicable laws.

Primitive Management Zone

This zone encompasses the area to the west and north of the cave mountain ridge, outside of the semi-developed zone, as well as those areas inside Lewis and Clark Caverns which have no present or historical development or alterations, excluding speleothem breakage. This zone is approximately 1,500 acres in size.

The primitive zone would be reserved for near wilderness type experiences. Challenge in this zone would be high. Visitors would have only infrequent contacts with one another or with Park staff. They would be in an environment essentially free of human influence and alteration. Natural processes and conditions would predominate and be perpetuated in this zone.

1. Visitor Experience

The Park primitive zone would provide the opportunity to experience the unaltered, natural areas of the Park in relative solitude. This area of the Park would be reserved for hiking only. No interpretive exhibits or signs would be provided. Information kiosks and access information signs would be placed at the major primitive zone access and parking areas. All rules and regulations would be conveyed to recreationists in these access areas through the use of low profile information kiosks and/or signs. The cave primitive zone will remain closed to non permitted visitation.

2. Access

Access would generally be difficult. This zone would contain a limited number of maintained hiking trails, with no developed or primitive roads. Public access would be on foot only. Park

staff could use motorized vehicles to access this area in emergency situations. Most management and maintenance activities would be by foot access only (at the discretion of Park management).

3. Natural Resource Management

The natural environment would be preserved to the greatest extent possible, while accommodating low-density visitor use. Visitor use could be controlled if necessary to protect resources; however, with the anticipated light use, visitor use control measures are not expected to be needed. Visitor use and resource monitoring would be carried out on a routine basis. Undesirable non-native plant species such as knapweed, dandelion and cheatgrass would be controlled if necessary (if such control measures are deemed feasible and would not result in significant damage to native plant species, wildlife or negatively affect visitor or employee safety). Weed control activities would mostly be focused on the major access points along Montana Highway 2.

Wildlife viewing opportunities would be high in this zone and promoted to the greatest extent possible. Mitigation efforts would be carried out in areas where habitat disturbances have occurred due to visitor use or past natural system alterations if such efforts are deemed feasible. Native wildlife species historically found within the Park and surrounding Jefferson River, London Hills ecosystem would be considered for re-establishment within this zone. Due to the biological, management and social complexities involved with native species reintroduction into historic ranges, re-introduction proposals will be evaluated on a case by case basis by the Wildlife Division in compliance with all Department policies and directives and Montana Environmental Policy Act stipulations. Wildlife management activities such as hunting would be permitted in this zone in accordance with all applicable laws, regulations, and harvest limits for the hunting district 333.

Wildfires occurring within this zone would be extinguished as soon as possible.

4. Facilities

No development would be permitted in this zone and there would be no further modifications to the environment, aside from improved hiking trails, and information kiosks and regulation signs along Highway 2 access points. Overnight camping would be prohibited within this zone.

5. Cultural/Historic Resource Management

Any identified sensitive areas containing archeological, cultural, or historic resources would be protected to the greatest extent possible according to SHPO guidelines, while adhering to the guidelines set forth for primitive zone management actions and maintenance activities. An emphasis would be placed on off-site interpretation. No on-site interpretive signs would be provided.

6. Maintenance

Maintenance activities would be for the purpose of protecting Park resources and possibly restoring areas disturbed by human activities. No recurring maintenance would take place except those associated with Highway 2 access points.

CHAPTER III:
ISSUES, PREFERRED OPTIONS, AND BENEFITS
(Draft—2/25/2000)

The preferred options to address the key plan issues are listed below. The benefits of each preferred option are presented with a brief summary of how the preferred option will enhance the Park's natural, historic and cultural resources, recreational opportunities, visitor services, and economic activity. An overview of how these preferred options evolved from earlier alternatives is included in Appendix B.

ISSUE 1: NEW TRAILS

There is potential for developing additional trails in the Park (see figure 9). In the 1950s and early 1960s a series of jeep trails were constructed throughout the Park as fire breaks. These narrow roads were never maintained, but many are still clearly evident today. Some old roads would function very well as trails, requiring for the most part only minor modifications and the placement of information and direction signs. The majority of the proposed new trails would follow these existing roads. The preferred option calls for developing all potential trail routes within the developed and semi-developed management zones in the Park (see master site plan map for potential trail locations). The only existing designated trails in the Park are the nature trail loop in the northeast corner of the Park, and the cave tour trail, which includes the cave entrance and exit trails.

Public Comments

The preferred option received the most support based on comments received. The citizens advisory committee also supported this option. The development of a trail to the river access site was supported by 37 percent of respondents during the 1994 summer survey. The majority of summer visitors answered neutral or no opinion when answering this question, with little opposition.

The preferred option would incorporate some of the old jeep roads into a Park trail system. The system would provide trail access to roughly two-thirds of the Park and would greatly enhance the recreational opportunities available with minimal costs and environmental impacts.

In addition to the trails proposed within the boundaries of the Park, the Citizens Advisory Committee suggested investigating the long-term possibility of a cooperative rail-trail project on the opposite side of the Jefferson River, along the old Milwaukee Road corridor (assuming willing sellers). A trail along the River could offer additional interpretation opportunities, as it would parallel the Lewis and Clark National Historic Trail.

Benefits of Preferred Option

A. Natural Resource Related Benefits:

The development of an interconnecting trail system would greatly enhance public understanding and appreciation of the Park's unique natural, cultural and historic resources found outside of the well-known cave system. Public awareness and understanding of the need for continuing resource protection and enhancement efforts would be heightened.

B. Visitor Services/Recreational Opportunity Benefits:

Recreational activities will be greatly expanded beyond what is currently provided with little or no impact to the Park environment. An increase in Park trail opportunities has been cited as a very high priority issue through the various visitor surveys and public meetings conducted as part of the management planning process.

C. Economic Benefits:

An increase in the recreational activities available at the Park will help to increase the average length of stay of Park visitors (which is currently one-half day). By increasing the average length of stay to approximately a full day, the direct economic impact to the area surrounding the Park would increase by approximately $500,000. The existing economic impact to the surrounding area is estimated to be $1,374,000 annually (McCool, 1993).

ISSUE 2: TRAIL USE

This issue concerns the types of use that will be allowed on new or existing trails in the Park. The primary trail use proposed for the Park is hiking. The preferred option would designate all new and existing Park trails as hiking only. Opportunities for providing disabled access trails or trail segments will be examined.

Allowing off-road mountain biking in the Park is not a recommendation in this plan; however, there may be future opportunities for this type of trail use on a very limited basis. Any future mountain bike use would be examined in a separate environmental assessment, should this issue be investigated in the future. Bicycles will be permitted on Park roads.

The proposed trail system would not be adequate for horseback riding; horses on Park roads could create safety concerns and conflicts with vehicles, and therefore will not be allowed. Motorized trail use of any type will also not be permitted due to the relatively small number of trails and short distances involved.

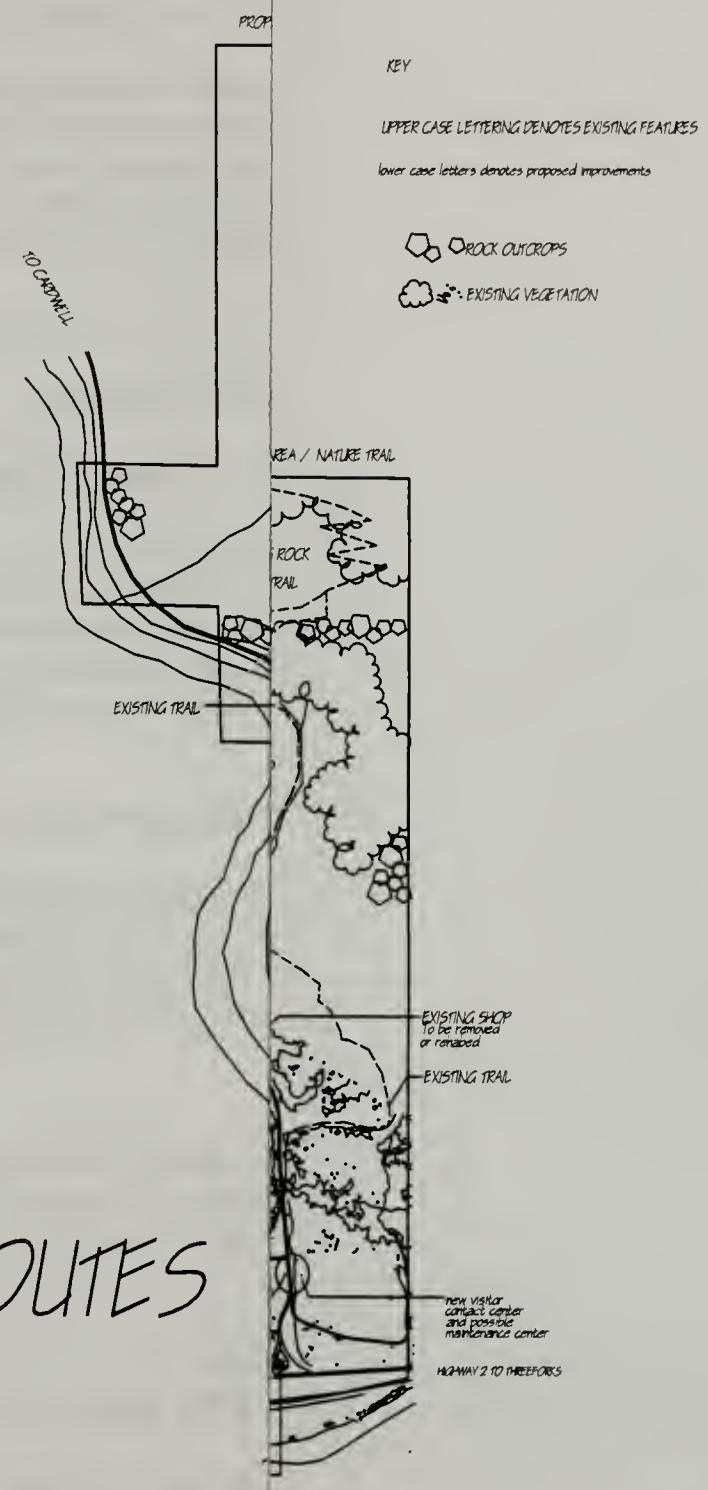

FIGURE 9

TRAIL ROUTES

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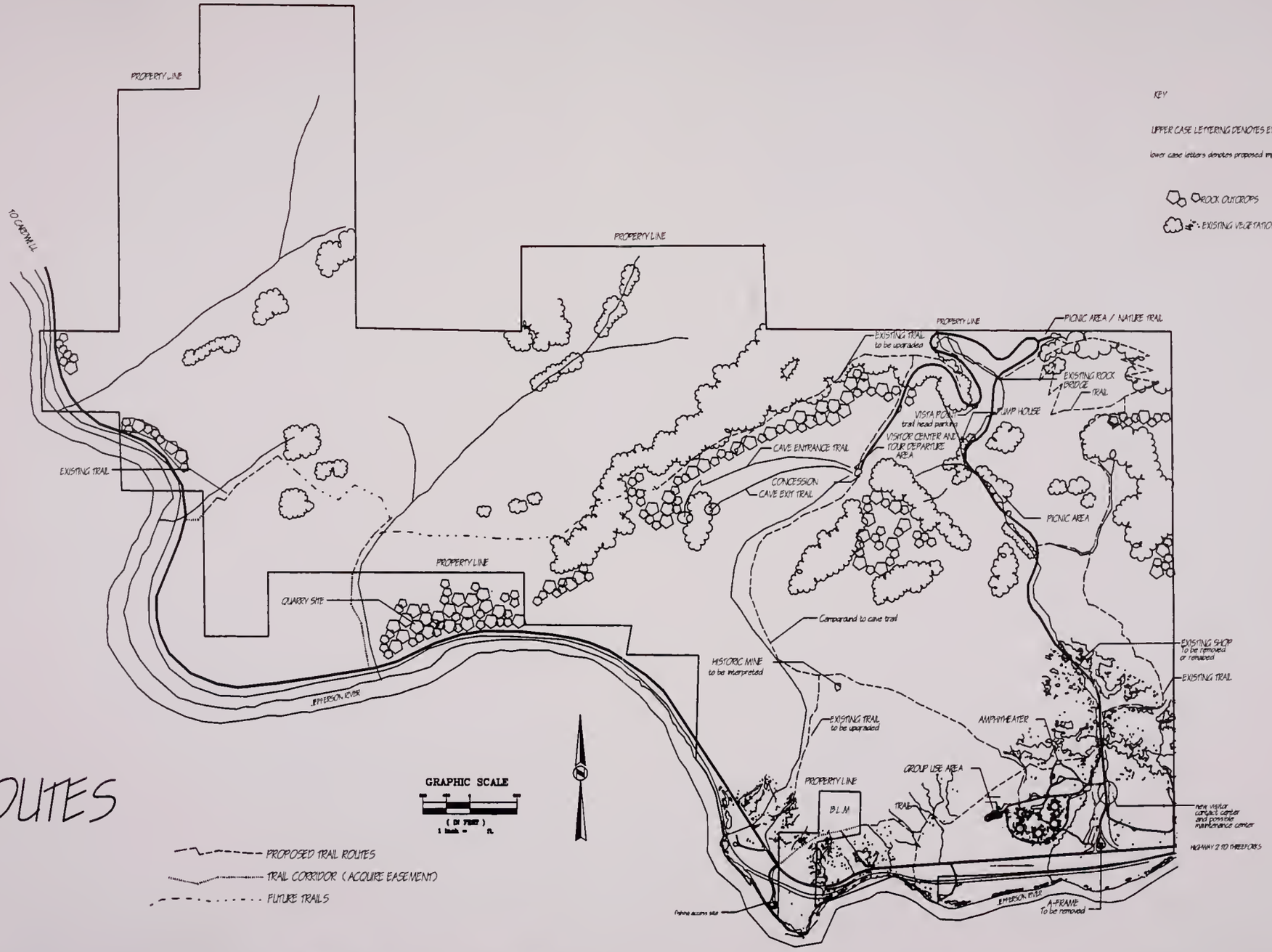

FIGURE 9

TRAIL ROUTES

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CHECKED BY: DATE:	APPROVED BY: DATE:	APPROVED BY: DATE:	LEWIS AND CLARK CAVERNS S. P. NEAR WHITEHALL M.T.

SHEET: 1 of 1

Public Comment

The preferred option received most of the supporting comments. The Citizens Advisory Committee supported the preferred option.

The preferred option would enhance the existing trail system by designating new hiking trails within the Park. Horseback riding in the developed, semi-developed or primitive management zones could cause serious natural resource damage to trail corridors and could increase the spread of noxious weeds. Relatively short trail lengths and abundant horseback riding opportunities on nearby National Forest and BLM lands are other reasons for not allowing this type of trail use.

Benefits of Preferred Option

A. Natural Resource Related Benefits:

Additional hiking trails would have relatively little impact in terms of soil compaction, vegetative cover loss, and weed proliferation. These impacts would be far greater if trails were open to horseback and mountain bike use. By limiting trail use to hiking, there would be less ground and vegetation disturbance at trailheads due to the minimal facilities necessary for this type of use, as opposed to the more significant developments usually required for equestrian activities.

B: Visitor Services/Recreational Opportunity Benefits:

Hiking is increasing in popularity throughout the United States, and the Park receives many inquiries on hiking opportunities. The Link Gulch, Dynamite Gulch, and Limespur FAS trails would become a popular attraction for visitors and allow enhanced access to many lesser-known areas of the Park, boosting both recreational and educational opportunities.

C: Economic Benefits:

The addition of new hiking trails will greatly assist in attracting individuals and groups of visitors to possibly stay an extra day or night in the Park. This has the potential of increasing the direct and indirect Caverns-related economic benefits for the surrounding communities.

ISSUE 3:
LEWIS AND CLARK EXPEDITION BICENTENNIAL

The Lewis and Clark Bicentennial in 2003-2006 is expected to be a major drawing card for visitors over the next six years. It is anticipated that a large percentage of these visitors will be following the Lewis and Clark National Historic Trail. It is anticipated that Lewis and Clark

Public Comment

The preferred option received most of the supporting comments. The Citizens Advisory Committee supported the preferred option.

The preferred option would enhance the existing trail system by designating new hiking trails within the Park. Horseback riding in the developed, semi-developed or primitive management zones could cause serious natural resource damage to trail corridors and could increase the spread of noxious weeds. Relatively short trail lengths and abundant horseback riding opportunities on nearby National Forest and BLM lands are other reasons for not allowing this type of trail use.

Benefits of Preferred Option

A. Natural Resource Related Benefits:

Additional hiking trails would have relatively little impact in terms of soil compaction, vegetative cover loss, and weed proliferation. These impacts would be far greater if trails were open to horseback and mountain bike use. By limiting trail use to hiking, there would be less ground and vegetation disturbance at trailheads due to the minimal facilities necessary for this type of use, as opposed to the more significant developments usually required for equestrian activities.

B: Visitor Services/Recreational Opportunity Benefits:

Hiking is increasing in popularity throughout the United States, and the Park receives many inquiries on hiking opportunities. The Link Gulch, Dynamite Gulch, and Limespur FAS trails would become a popular attraction for visitors and allow enhanced access to many lesser-known areas of the Park, boosting both recreational and educational opportunities.

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Caverns State Park will experience increased visitation related to the Bicentennial due to the Park's location on the historic trail, as well as the Park's name.

Actions to be taken by the Park to prepare for the event include the following:

A. Continue to promote and offer Lewis and Clark Bicentennial-related special events such as the annual "Corks of Discovery" interpretive river float on the Jefferson River.

B. Continue to promote and offer special guest speaker presentations on the Lewis and Clark Expedition as part of the summer campfire talk program.

C. Develop and place new interpretative signs about various aspects of the expedition, focusing on events and journal entries that occurred when the expedition was in the Three Forks and lower Jefferson River area.

D. Accommodate increased visitation by actively promoting private campgrounds in the area, and lodging opportunities available in the Three Forks and Whitehall areas.

E. Continue to pursue grant opportunities to fund Lewis and Clark Bicentennial projects.

F. Continue to be actively involved in local and regional planning efforts related to the event, such as attending meetings of the following: local chambers of commerce; Lewis and Clark Trail Heritage Foundation; Gold West Tourism Country; and state-wide interagency planning efforts.

Public Comment

Addressing the bicentennial as a management plan issue was endorsed by the Citizens Advisory Committee.

Benefits of Preferred Action

A. Natural Resource Related Benefits:

Enhanced knowledge of the natural history of the area during the Lewis and Clark era could have a beneficial effect on the way visitors treat their current environment.

B: Visitor Services/Recreational Opportunity Benefits:

The preferred action will enhance learning and recreational opportunities for Park visitors.

C: Economic Benefits:

Increased numbers of visitors are expected along the Lewis and Clark Trail during the Bicentennial period. Offering these travelers additional Lewis and Clark programs and information at the Park is likely to have a positive economic impact on the area.

ISSUE 4:
ACQUISITION OF SELECTED PROPERTIES

Acquisition will be oriented toward inholdings and adjacent parcels that are critical to the overall integrity of Lewis and Clark Caverns State Park. Existing Department land acquisition policy calls for the Department to buy new properties only from willing sellers and to purchase land at fair market value. In addition to fee title purchases, conservation easements to protect viewsheds and other values are also an option.

The Lands Section of FWP is responsible for coordinating all land purchases within the Department. Land acquisitions are subject to approval by the FWP Commission and State Land Board. The Department has compiled a list of acquisition priorities, which is included in Appendix C. Because it is difficult to predict when and where opportunities will become available, the Department must take an opportunistic approach.

Public Comment

A state-wide survey of adult Montanans suggests there is support for acquiring inholdings within Montana State Parks. According to the survey, 55 percent of the resident respondents indicated they either "strongly supported" or "supported" acquiring inholdings. Results from the same survey showed that 60 percent of the resident respondents "strongly supported" or "supported" increasing buffer zones around Montana State Parks (ITRR, 1996).

A. Natural Resource Benefits:

The acquisition of inholdings and key adjacent parcels is critical for the long-term preservation of the Park's natural resources.

B. Visitor Services/Recreational Opportunity Benefits:

Key acquisitions will enhance recreational opportunities in the Park, as well as provide an outstanding setting for the services provided to visitors.

C. Economic Benefits:

By helping maintain the Park's natural integrity and scenic beauty, critical acquisitions will help ensure that the Park remains a desirable place to visit, and an important piece of the local and regional tourism economy.

ISSUE 5: CAMPGROUND IMPROVEMENTS

This issue involves possible improvements to the campground complex. The preferred option includes the placement of playground equipment within the campground/cabin complex and installation of a new amphitheater lighting system. The proposed playground equipment would be based on a theme compatible with the Park's natural and/or historic features (e.g. the Lewis and Clark Expedition). Additional trees and an expanded irrigation system are also proposed improvements for the campground.

A second phase to improvements already made to the group use area is also planned (see figure 10). Phase II group use area work includes the following improvements: potable water; trees; irrigation system; picnic tables; fire rings; and a picnic/group use pavilion with a barbecue, electricity, utility sink, and signing.

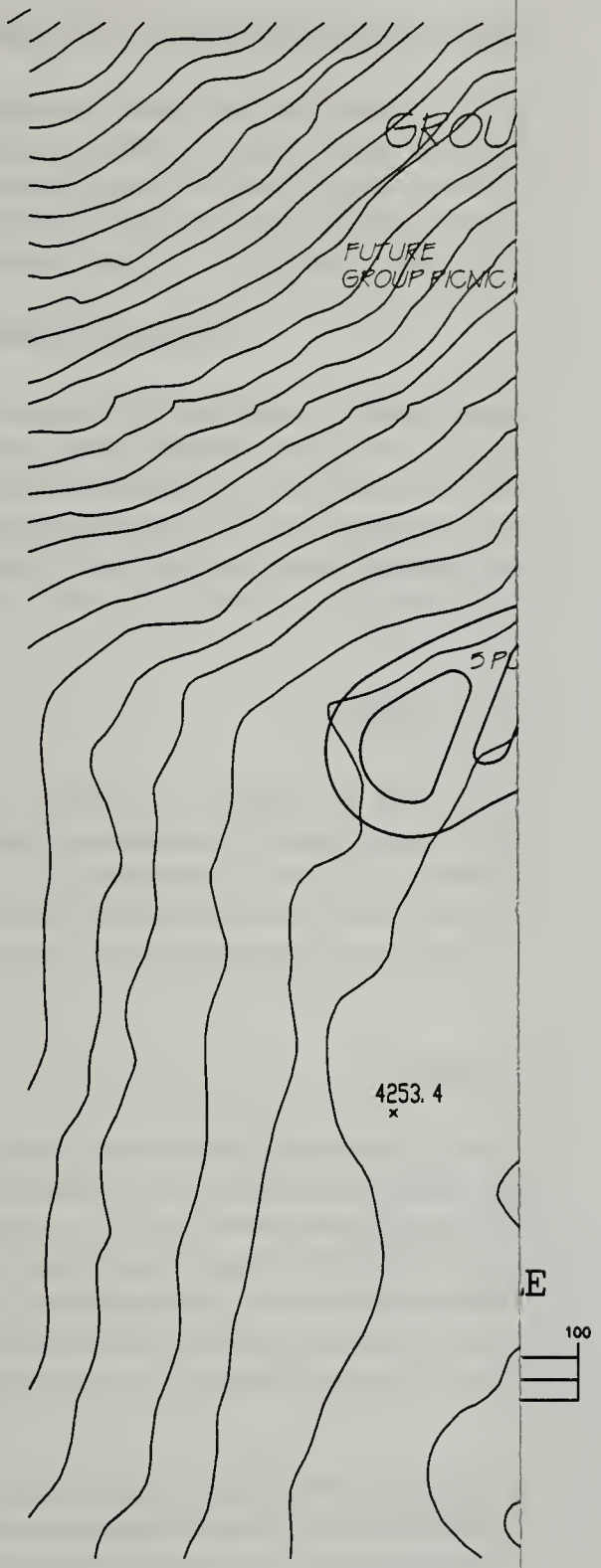
Public Comments

The preferred option received the most support at the open house meetings and was supported by the Citizens Advisory Committee. Results of the summer visitor survey related to this issue were inconclusive, with most respondents indicating neutral or no opinion.

Benefits of the Preferred Option

A. Natural Resource Benefits:

Installation of a new lighting system in the Park amphitheater will indirectly benefit Park natural resources by strengthening the provision of on-site interpretive programs that utilize the amphitheater area. The group use pavilion will double as an educational group learning center, enhancing understanding of Montana's natural resources for school groups.



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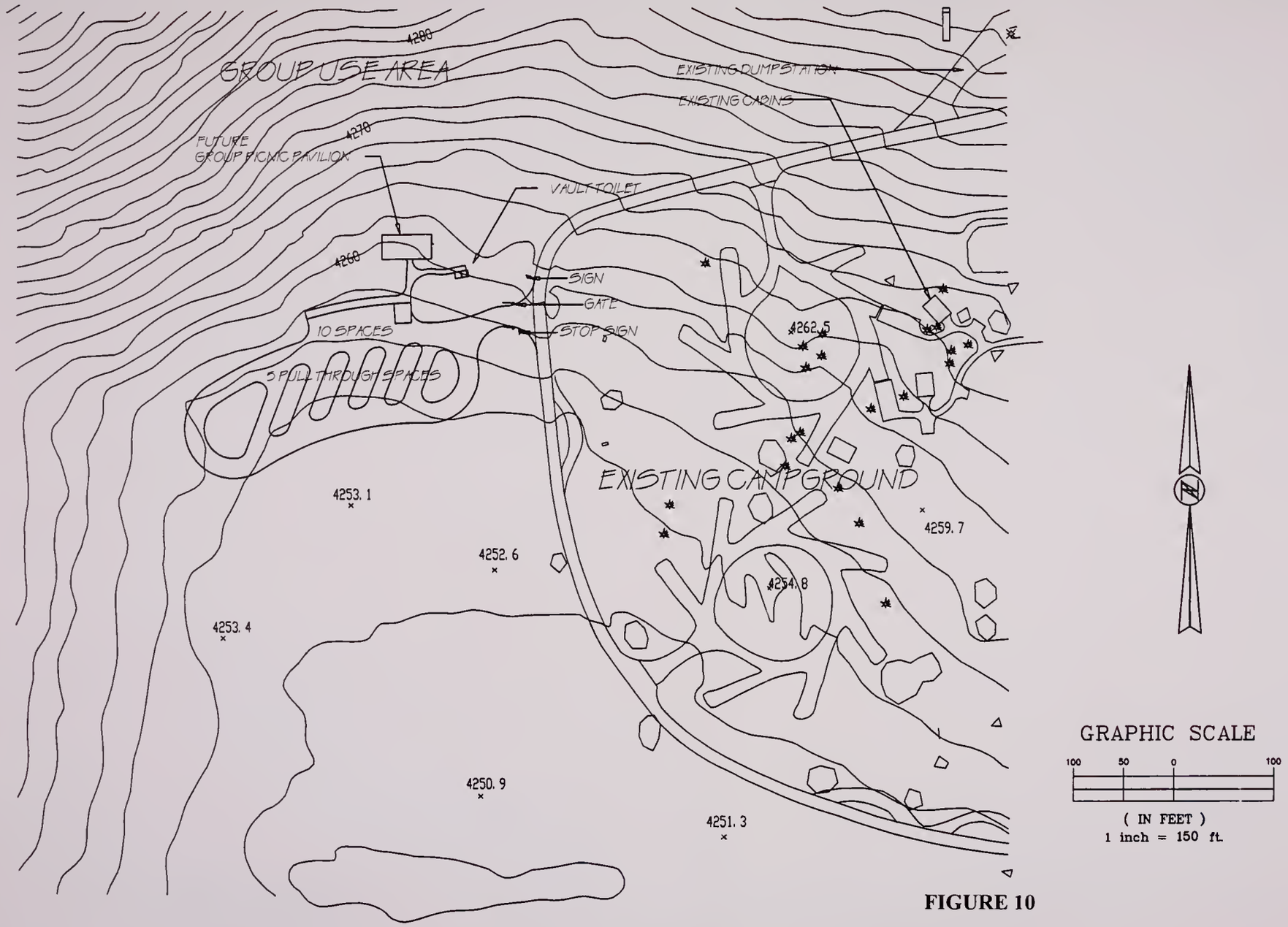

FIGURE 10

EXISTING GROUP USE AREA

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B. Visitor Services/Recreational Opportunity Benefits:

The addition of playground equipment will fulfill an increasing public demand for these facilities and enhance recreational opportunities for children. Improved amphitheater lighting will enhance the summer guest speaker campfire talk program. Additional trees in the campground will provide much-desired shade for campers. Completion of phase II of the group use area will also significantly enhance visitor services.

C. Economic Benefits:

Improvement of the amphitheater lighting system and the installation of playground equipment will have a positive impact to the Park's earned revenue and to the area's tourism-dependent economy by enhancing the visitor's overall park experience. Additional shade in the campground may help to entice campers to spend an extra night in the Park. Finally, completion of the group use area improvements will add to the package of economic benefits provided by the Park, and further increase Park earned revenue potential.

ISSUE 6: HUNTING

Opening portions of the Park to big game and upland game bird hunting has been studied as part of this management planning process. The preferred option would open only the Park's primitive management zone (Park land west of Cave Mountain) for hunting, with the semi-developed and developed management zones remaining closed (see figure 11). Additional information on the hunting issue is included in Appendix D.

Public Comments

Based on the results of the August 1994 visitor survey, Montana residents are evenly split on the hunting issue, with one third supporting the idea, one third neutral or no opinion and, one third opposed. Non-residents are generally opposed, with only 10 percent agreeing or strongly agreeing that hunting be permitted. Based on comments received at the three open house meetings, which basically represents local opinions, 82 percent of those who submitted comments feel that some form of hunting should be allowed in the Park. The Citizens Advisory Committee supported opening the area west of Cave Mountain to hunting (the preferred option).

The preferred option would provide the opportunity for enhanced hunting access and the desired management of game populations in the Park, while at the same time providing non-hunting visitors the opportunity to visit the Park without conflicting with hunters.

B. Visitor Services/Recreational Opportunity Benefits:

The addition of playground equipment will fulfill an increasing public demand for these facilities and enhance recreational opportunities for children. Improved amphitheater lighting will enhance the summer guest speaker campfire talk program. Additional trees in the campground will provide much-desired shade for campers. Completion of phase II of the group use area will also significantly enhance visitor services.

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The preferred option would provide the opportunity for enhanced hunting access and the desired management of game populations in the Park, while at the same time providing non-hunting visitors the opportunity to visit the Park without conflicting with hunters.

Benefits of Preferred Option

A. Natural Resource Benefits:

Opening a portion of Lewis and Clark Caverns State Park to upland gamebird and big game hunting would allow for improved management of the Park's game species, specifically the mule deer population. With the utilization of hunting as a management tool, the general health of game populations within the Park and surrounding area will be enhanced by maintaining the limited carrying capacity of the available range and bolstering vegetative forage viability.

B. Visitor Services/Recreational Opportunity Benefits:

Additional hunting opportunities will be provided to the public in an area with little public land and limited access to private land, at a time when Park visitation is low. A needed boundary survey will be completed and signed, reducing the chances of private land trespass. Non-hunting visitors will still have the opportunity to visit the Park without conflicting with hunters. Wildlife viewing opportunities will be available for visitors year-around with the implementation of the preferred option.

C. Economic Benefits:

Both direct (Park user fees) and indirect (increased personal spending in nearby communities) economic benefits will result due to an overall increase in Park recreational opportunities.

ISSUE 7: CAVE MANAGEMENT

This issue includes cave tours, cave public use patterns, the recreational experience of cave tour visitors, inventories of cave biodiversity (flora and fauna), cave environmental data, visitor impacts, limits of acceptable change management, and a Park-wide geophysical inventory of cave resources, including lesser-known caves located within the Park.

Public cave tours and special off-trail use will be the only topics covered in detail in this Plan. Some of the other components of this issue, such as conducting cave resource inventories, limits of acceptable change management, and visitor use management are currently under development. Those subjects not covered here will be addressed in future, resource-specific management planning.

The preservation and protection of cave resources will take on increasing significance due to the need to upgrade and maintain existing resource protection and visitor service-related infrastructures within the cave system (e.g., handrails, lighting, and doors). Visitor services and use of the cave will be closely monitored, with changes initiated as new information becomes available on the most effective means of protecting the cave while providing for public use.

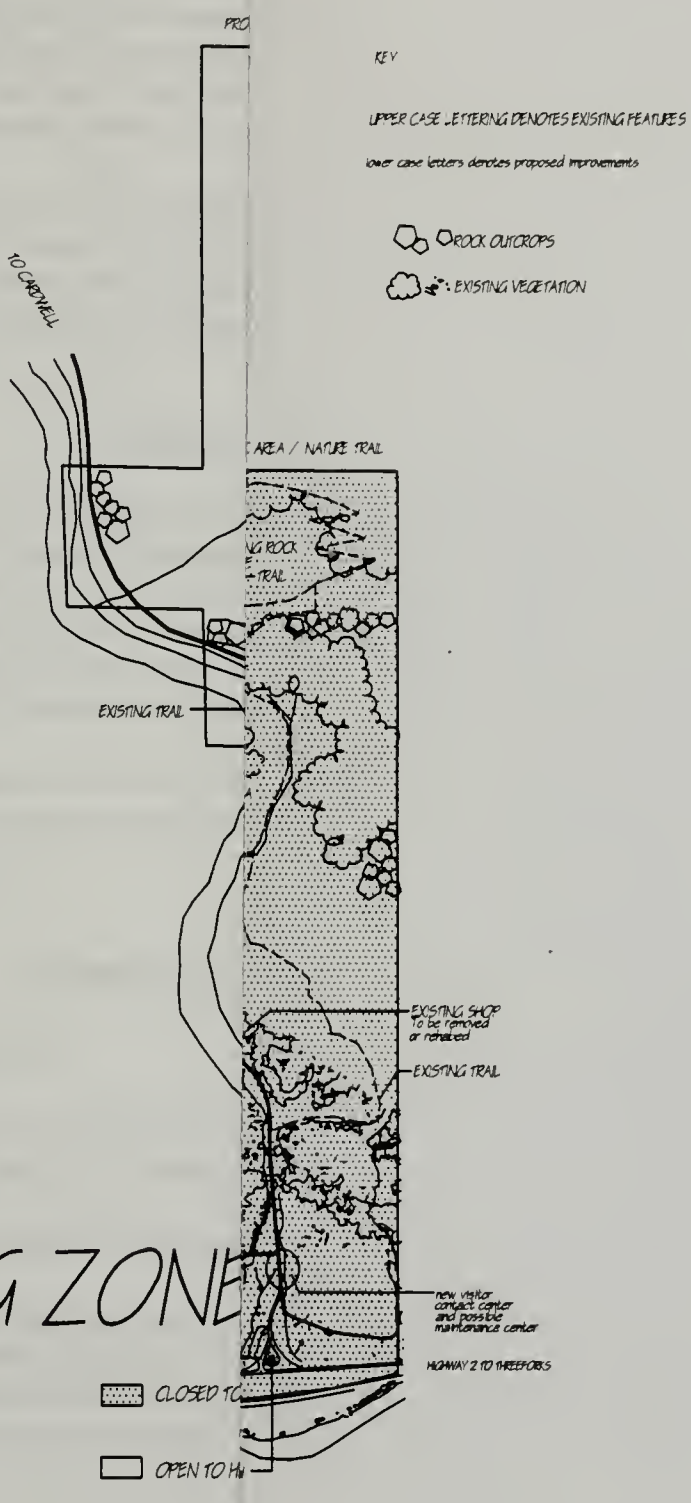

FIGURE 11

HUNTING ZONE

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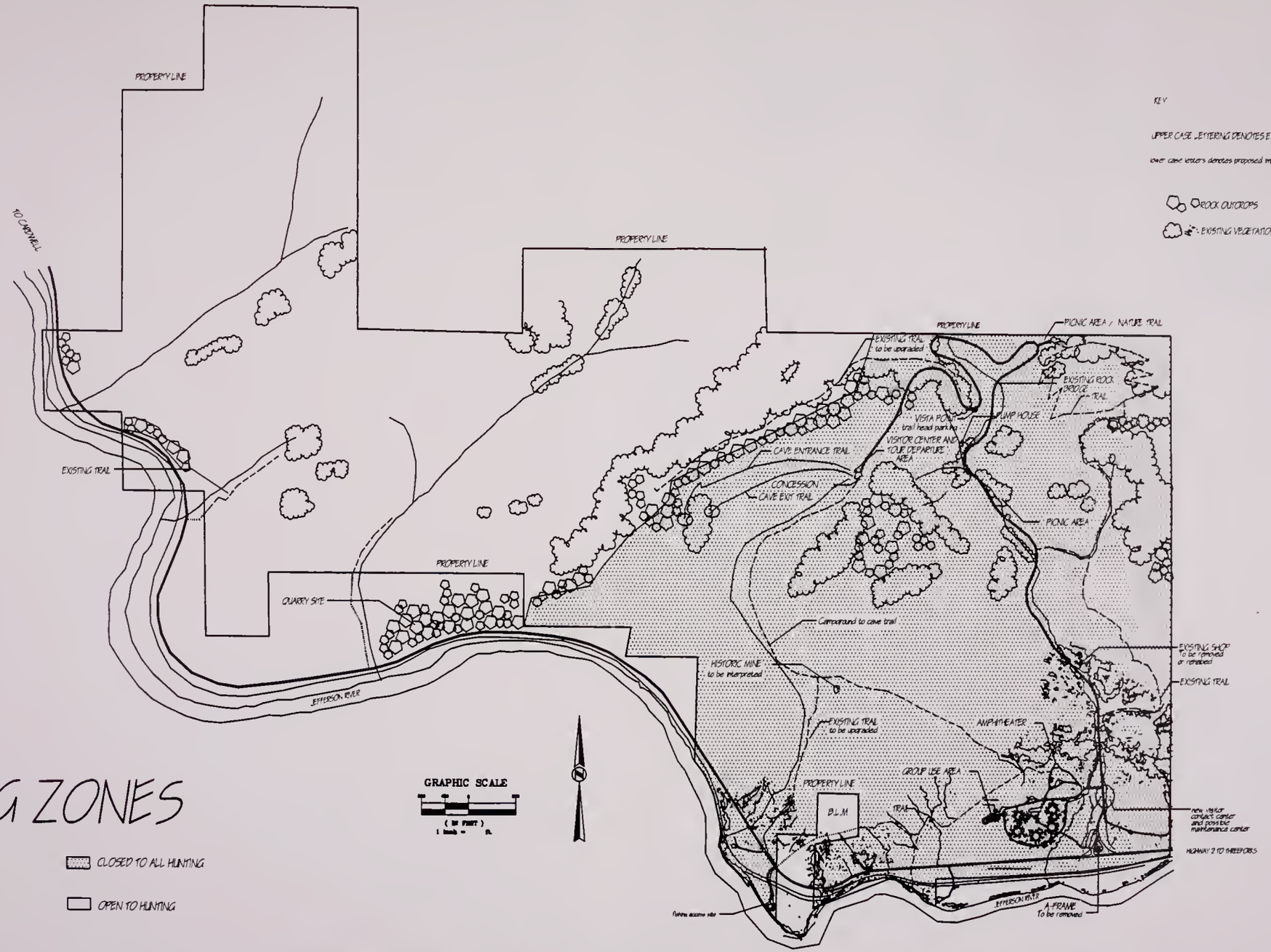

FIGURE 11

HUNTING ZONES

CLOSED TO ALL HUNTING

OPEN TO HUNTING

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Montana Fish, Wildlife & Parks

LEWIS AND CLARK CAVERNS S. P.
NEAR WHITEHALL M.T.

SHEET: 1 of 1

A) Cave Tours

Based on public surveys and the open house meetings there are two main concerns related to the existing tour operations. First, the current maximum group size of 35 per group may to too large. Large group sizes tend to diminish the quality of the tour and often make it difficult for the tour guides to monitor their entire tour group. Second, small children (e.g., under 5 years of age) sometimes make it difficult for others in the group to enjoy their tour.

The preferred option is to reduce the maximum group size from 35 to 30. Establishing a minimum age limit was discussed during the planning process, but the decision was to not put restrictions on age at this point. Imposing age restrictions for cave tours was not selected because it would negatively impact opportunities for family groups to tour the cave.

Public Comments

The vast majority of visitors surveyed in the 1994 visitor study answered questions related to their cave tour in a positive manner, indicating a high level of satisfaction with the existing tour program (see Appendix G). Group size and small children were the most commonly cited problems by both Caverns staff and visitors, and are the basis for the options presented above. Of the visitors who responded to the survey, 31 percent indicated that tour group size was too large, while 23 percent felt that small children were distracting on their tour.

The preferred option (reducing maximum group size from 35 to 30) would address the problems most commonly cited by visitors and staff. The citizens advisory committee supported the preferred option.

Benefits of Preferred Option

A. Natural Resource Benefits:

Smaller group sizes will enhance the guide's ability to maintain control and monitor group actions, thereby increasing the level of protection for the cave environment.

B. Visitor Services/Recreational Opportunity Benefits:

There is a direct correlation between cave tour group size and the quality of the cave tour experience for visitors. Smaller tour sizes allow for better interaction between the guide and visitors and provide for enhanced interpretation of cave features not possible with larger groups. Visitor safety will also be improved.

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C. Economic Benefits:

A higher quality experience will impact tourism-related economic benefits by enhancing the Park's positive image, as communicated by previous visitors, potentially encouraging both new and repeat visits.

B) Off-Trail Cave Use

This issue pertains to whether or not to allow special, off-trail use to areas of the cave not normally open for visitation. There exists strong interest by some members of the public for access to areas of the cavern which are not visited along the tour trail.

However, because of the physical layout of cave passageways, the fragile nature of those areas not visited by the tour trail, and safety concerns, special off-trail or "wild cave" tours to the general public will not be permitted. The preferred option will continue to allow--on a very limited basis--special off-trail use for Park staff and individuals involved in valid scientific research projects.

Staff training within the Caverns may be held infrequently to improve understanding of how the cave system relates to the study of cave and karst resources. The Department would also entertain--on a case-by-case basis--scientific and research proposals that would help further understanding of the cave resource. Speleobiological research and cave mapping would be examples of particular needs which might justify off-trail use. These proposals would not be advertised or requested, but may be permitted depending on Park research needs and the experience of the group or individual (e.g., members of the National Speleological Society or university researchers might make good candidates). An additional consideration would be the applicant's knowledge of accepted caving techniques, including use of proper equipment and familiarity with safety/rescue procedures. A written contract would be required before off-trail use would be allowed with outside individuals or groups.

Public Comments

The preferred option was supported by both Park staff and the Citizens Advisory Committee.

Benefits of Preferred Option

By specifying areas of the cave as off-limits to general public tours, the more delicate, pristine areas of the cave would be permanently protected. Access to these closed areas would be allowed only for scientific or management-related reasons. Keeping portions of the cave off-limits would also help maintain visitor safety and reduce the need for rescues.

ISSUE 8: JEFFERSON RIVER ACCESS

This issue involves the development of the Limespur Fishing Access Site (FAS) on the Jefferson River. No formal access to the river currently exists at this location. The existing primitive road and vehicle turn-around receives light to moderate use by anglers and river floaters. Access to the river currently involves crossing active railroad tracks. A safety problem exists at the present access due to limited sight distance for vehicles entering or exiting the site on to the highway.

The preferred option involves development of an improved concrete boat ramp access, with trailer and vehicle parking, a vault rest room, and interpretive displays (see figure 12). The new access would be located approximately 100 yards east of the existing primitive launch site. As recommended by FWP's Design and Construction Bureau, the current site would be closed to motorized vehicles due to the safety concerns mentioned above, and reclaimed with native vegetation.

Public Comments

The majority of comments received at the open house meetings were supportive of developing an improved access, while retaining the existing (unsafe) primitive site. Summer visitors were supportive of some type of access with a trail to the Park campground.

The Citizens Advisory Committee endorsed the preferred option.

Benefits of Preferred Option

A. Natural Resource Benefits:

Natural resource benefits are related to enhanced protection of the Jefferson River riparian zone by providing a "hardened" access point and eliminating unrestricted motorized vehicle travel along shoreline areas.

B. Visitor Services/Recreational Opportunity Benefits:

Recreational opportunities related to fishing, boating and wildlife viewing would be greatly improved by the provision of an enhanced river access, easily accessible from the Park campground and trail system.

C. Economic Benefits:

Economic benefits would be enhanced by providing additional water-based recreational opportunities, increasing the chance that visitors will spend more time in the area. Additional economic benefits could involve new private business opportunities related to water-based recreational equipment rentals.

ISSUE 9:
PUBLIC CONTACT CENTER/PARK ENTRANCE STATION

The preferred option would involve the construction of a new public contact center, including a permanent entrance station and administrative office to replace the existing A-Frame and temporary entrance station. The A-Frame information center and temporary entrance station would be removed.

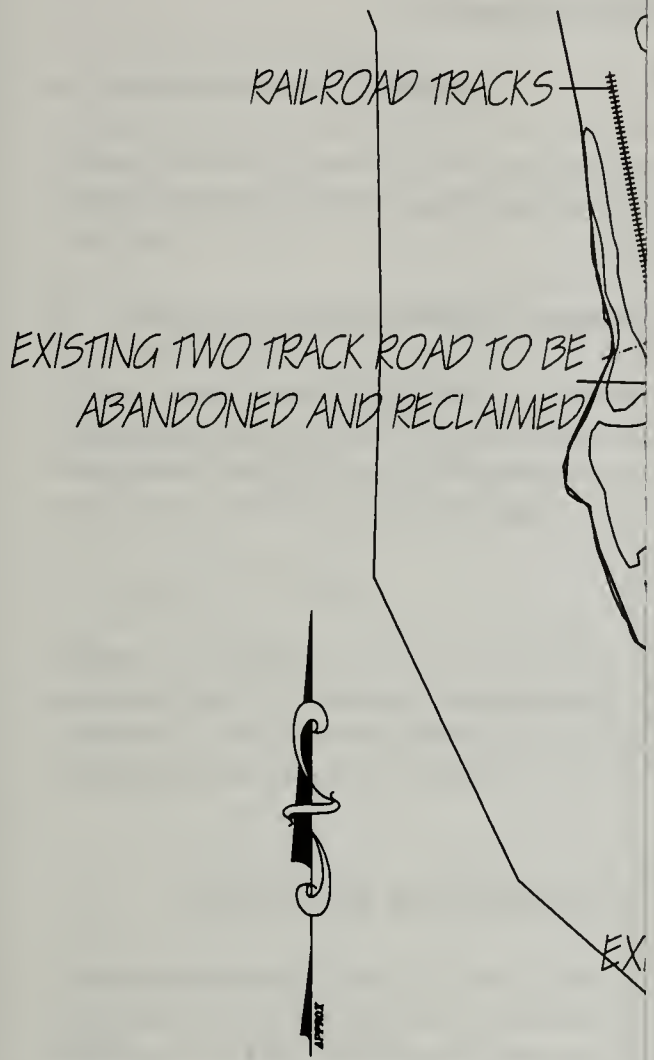
There is also agreement that improvements need to be made to the Park maintenance facilities, but a specific approach has not been selected in this Plan. Options discussed during the planning process include making improvements to the existing facility, adding an improved maintenance facility at the existing maintenance site, or including a new maintenance facility near the Park entrance.

With any major new construction, and effort will be made to replicate design themes from the historic structures constructed in the Park by the Civilian Conservation Corps (CCC) in the 1930s.

Public Comments

The Citizens Advisory Committee supported the preferred option to remove the A-frame and replace it with a new public contact center/entrance station.

The preferred option was chosen due to the existing safety, structural, and disabled accessibility problems associated with the existing A-Frame facility. It is believed that upgrading the A-Frame would not be cost-effective or practical. The existing A-Frame location also presents a traffic safety hazard due to confusing traffic flow patterns and proximity to the highway. The incorporation of a new public contact center at the Park entrance would serve to focus management and administrative functions at the Park entrance, where they would be easily accessed by the public and allow Park staff to better monitor off-season Park activities.



RIVER ACCESS

FIGURE 12

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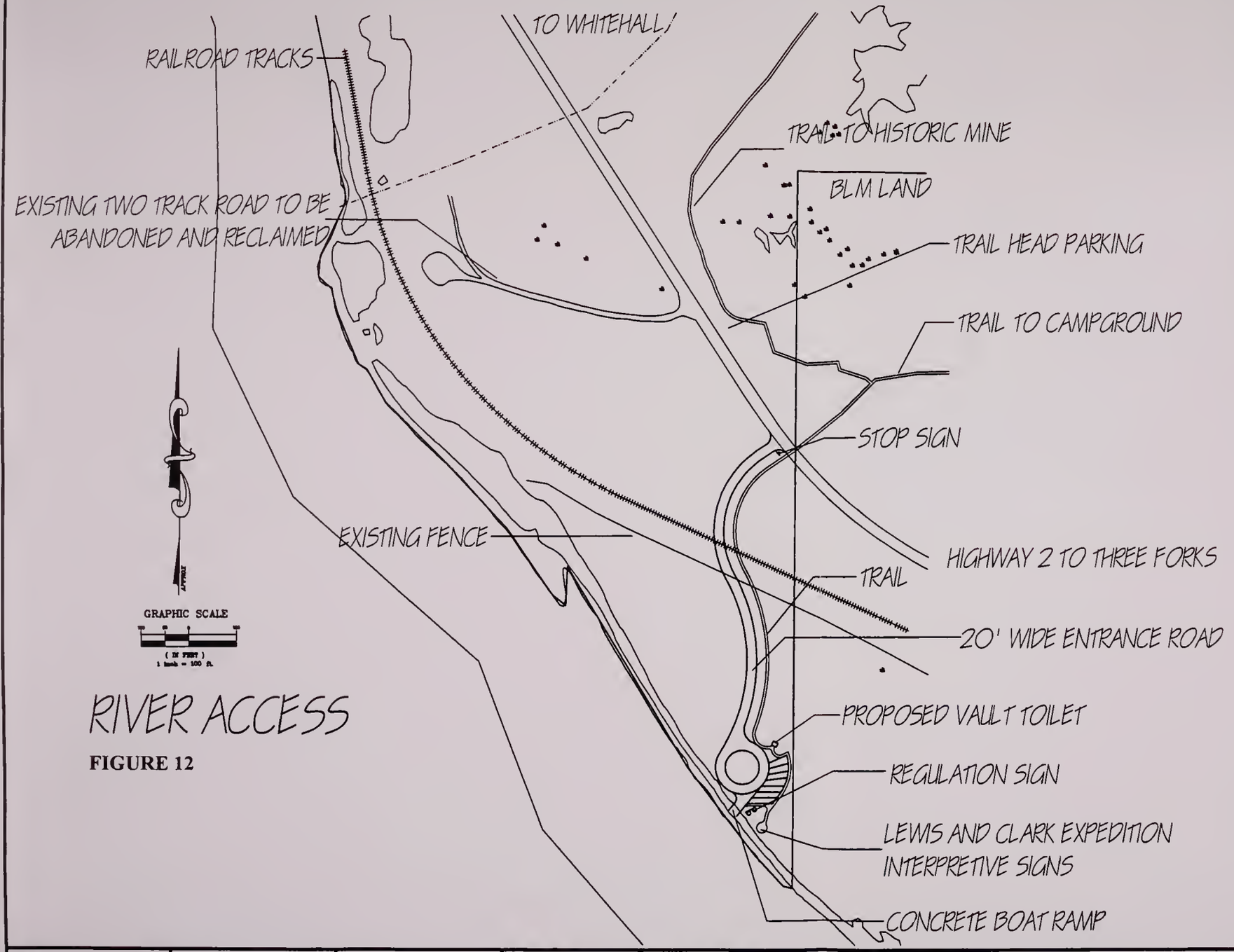

RIVER ACCESS

FIGURE 12

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LIMESPUR FISHING ACCESS
NEAR WHITEHALL

SHEET: 1 of 1

Benefits of Preferred Option

A. Natural Resource Benefits:

Protection of Park resources will be enhanced by providing a main contact point for all Park visitors, and by providing increased security through enhanced monitoring of off-season activities.

B. Visitor Services/Recreational Opportunity Benefits:

Visitor service would be significantly improved by providing a highly visible and easily accessed contact point for information and fee collection. Safety problems associated with the Park access road/Highway 2 interchange and pedestrians crossing the entrance road to access the A-Frame would also be alleviated.

C. Economic Benefits:

Adding a main public contact point for Park visitors would help provide the following economic benefits: reduced vandalism and damage to Park resources; enhanced fee compliance; and improved public/Park communications, which in turn will make the Park and surrounding area a more desirable place to visit.

ISSUE 10: BIGHORN SHEEP REINTRODUCTION

The reintroduction of native species to Lewis and Clark Caverns State Park will produce biological, social, and economic benefits. The reintroduction of Rocky Mountain Bighorn Sheep into the Park, for example, has been proposed in the past, but no action has been taken to date. Bighorn Sheep are native to the region but have been absent from the area for much of this century. It is believed that adequate habitat exists within the Park and surrounding area to support a viable population.

Park staff and the Citizens Advisory Committee supports the future reintroduction of Bighorn Sheep into the area (London Hills ecosystem). Native species reintroduction efforts are coordinated by the Wildlife Division of FWP. Any future re-introduction proposals would be addressed in an environmental assessment developed by the FWP Wildlife Division and subject to approval by the FWP Commission.

The Department's Bighorn Sheep transplant policy for newly established herds is detailed in the following section.

Benefits of Preferred Option

A. Natural Resource Benefits:

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The Department's Bighorn Sheep transplant policy for newly established herds is detailed in the following section.

Bighorn Sheep Reintroduction Policy

To reduce the possibility of disease outbreaks in newly established transplanted Bighorn Sheep herds, and to provide assurance to landowners that the presence of newly established Bighorn Sheep will not be used by the Department and/or Commission to restrict existing land management, it is the policy of the Montana Fish, Wildlife and Parks Commission pursuant to Montana's Importation, Introduction, and Transplantation of Wildlife statute (87-5-701-721, MCA) to:

1) Give preference to those sites which are not in close proximity to domestic sheep or are separated by physical barriers to reduce the potential of interaction.

2) Consider only transplants to those sites with a majority of public land and/or legal or landowner granted access to assure that hunting and trapping can be used to control herd size in the future.

3) Approve transplants on private land only with the written approval of the private landowners in the area where the herd is expected to be established.

4) Approve transplants only where the department has determined that there is sufficient winter and other seasonal range capacity, considering current livestock use and potential for competition with other wild ungulates, to support the anticipated population size.

5) Utilize hunting and trapping to control herd size within previously established levels unless mutual agreement to allow an increase can be reached by affected landowners within the herd's primary range.

6) Take actions to prevent the establishment of Bighorn Sheep populations on private lands other than the predicated area unless the affected landowner(s) approve.

7) Approve transplants only in cases where there are significant public benefits.

8) Assume the risk of transplant failure, holding no private landowner responsible without proof of negligence.

9) Not seek modifications, without the consent of the affected livestock owner, to state or federal allotments or other management plans in the unlikely event that Bighorn Sheep from a transplanted herd establish in another area utilized by domestic livestock.

Public Comments

The Citizen's Advisory Committee supported the reintroduction. Surveys of Montana residents and visitors have underscored that watching wildlife is one of the most popular recreational activities in the State.

Benefits of Preferred Option

A. Natural Resource Benefits:

Depending on the outcome of additional analysis, reintroduction could introduce a native Montana species to suitable habitat.

B. Visitor Services/Recreational Opportunity Benefits:

The presence of Bighorn Sheep in the Park would be one more attraction for the many visitors interested in wildlife viewing. A sustainable population could also create additional hunting opportunities.

C. Economic Benefits:

By increasing the array of natural features in the Park, reintroduction could enhance the positive economic impact the Park has on surrounding communities. FWP's reintroduction policy considers impacts on private property holders as part of the decision-making process. Reintroduction of Bighorn Sheep to the Park would be required to go through a decision-making process that meets the requirements of the Montana Environmental Policy Act (MEPA).

PREFERRED MANAGEMENT PLAN ALTERNATIVES

The following summarizes the preferred options for each issue. These options collectively form the preferred management plan alternative.

Issue	Description
1) New Trails	Full development of all trail routes (utilizing some old jeep roads).
2) Trail Use	Hiking only.
3) Lewis and Clark Bicentennial	Proceed with planning and preparation.

Issue	Description
4) Land Acquisitions	Support FWP Lands Section efforts to move forward with feasible acquisitions.
5) Campground	Playground and amphitheater lighting, new trees, expanded irrigation, phase II of the group use area.
6) Hunting	Developed and semi-developed management zones closed to all hunting; primitive zone open (rifle/shotgun/bow).
7) Cave Management	Cave Tours: Maximum group size of 30; no age limits. Off-Trail: Very limited off-trail use for management and scientific purposes. Continue on-going planning efforts on issues such as resource inventories, limits of acceptable change management, and collecting and monitoring environmental data.
8) River Access	Close existing informal access, develop new access with parking, boat ramp, vault restroom, and interpretive displays.
9) Public Contact Center	New public center/entrance station/offices near Park entrance. Also, improve Park maintenance facilities to enhance employee health, safety, and efficiency. The intent is to protect the Park resources and visitors, while not intruding unnecessarily on the visitor or viewshed. The existing A-frame would be removed.
10) Bighorn Sheep	Park/Citizens Advisory Committee support future reintroduction; to be coordinated by FWP Wildlife Division.

ECONOMIC IMPACTS

Based on earlier estimates provided by the University of Montana's Institute for Tourism and Recreation Research (ITRR), the Park's economic impact to surrounding communities and statewide tourism industries is estimated to total approximately ten million dollars over the ten-year life of this Plan. This would result in up to one million additional dollars per year into local, regional, and state-wide economies (McCool, 1993).

A more recent study by ITRR found that in 1998, approximately 38 percent of the 3.8 million non-resident travel groups visiting Montana traveled through Jefferson County, the location of the Park. Non-resident visitors to Jefferson County spent $4,220,000, or approximately $418

for every resident in the County. Non-resident groups who traveled through Jefferson County and stayed at least one night spent an average of $80 per day while in Montana, remaining an average of seven days in the State. Overall, travelers to Jefferson County tended to stay in Montana longer than the average visitor to the State. Survey respondents from Whitehall cited Lewis and Clark Caverns State Park as an important component of the area's tourism economy (ITRR 2000).

CHAPTER IV:
PLAN TIMELINE AND IMPLEMENTATION
(Draft—2/25/2000)

PLAN TIMELINE

The issues in the Plan will be addressed according to the following general schedule. This is a tentative timeline, and is subject to change due to legislative mandates, budgetary constraints, and FWP directives and/or planning schedules.

1. New Trails

2000 - Link Gulch Trail will be completed and directional signs will be installed. Dynamite Gulch Trail will begin construction. Hire intern to conduct GPS survey for trail location and develop brochure with maps and trail information.

2001- Dynamite Gulch Trail will be completed from campground to nature trail; directional signs will be installed. Limespur FAS trails will be completed with directional signs installed.

2002 - Trails in semi-developed management zone will be developed. Connecting trail from nature trail to Vista Point will be developed. Installation of all directional signs will be completed. Apply for Gold West Country grant to promote new trails in the Park.

2003 - Hire intern to design and implement interpretive plan for historic mines.

2. Trail Use

2000 - Examine opportunities for providing disabled access trails or trail segments. Post "No horse use" and "no motorized vehicle use" signs as trails are constructed.

2001 - Promote trails in all literature as hiking trails.

2003 - Review use of trails

3. Lewis and Clark Bicentennial

2000 - Promote " Corks of Discovery" River Float and evaluate its direction. Schedule campground speakers on Lewis and Clark. Work with BLM cooperatively on interpretive signs. Apply for grants for interpretive signs. Attend local Chamber meetings and Lewis and Clark planning meetings. Attend National Lewis and Clark Trail Heritage Foundation meeting in Dillon.

2001 - Design, order, and install Lewis and Clark interpretive signs for Big Horn Sheep, Frazier Creek, nature trail, and cave entrance.

2002 - Evaluate "Corks of Discovery" and set directions (and limitations) for the event. Place order for Lewis and Clark interpretive signs for FAS.

2003 - Large focus on campground speakers on Lewis and Clark for the next 4 years. Information Center will promote private campgrounds and local lodging for Bicentennial. Offer "Corks of Discovery" in its reconstructed form.

4. Land Acquisitions

2000 - Send prioritized land acquisition requests to the land section. Initiate R&PP process with BLM.

2001 - Follow up work on land acquisitions, as requested.

5. Campground

2000 - Install 15 additional picnic tables in the group-use area. Install water system in group use area to include drinking water, utility sink, and drip irrigation system. Begin installing fire rings. Research other sites for pavilion design ideas. Begin tree planting in group use area.

2001 - Construct pavilion in group use area. Continue tree planting in group use area.

2002 - Install amphitheater lighting. Begin design work on playground equipment.

2003 - Install playground equipment.

6. Hunting

2000 - Conduct legal survey of Park boundary. Order signs to mark some Park boundaries at access points. Acquire easements across private land as needed. Sign hunting and no hunting zones.

2001 - Hunting information at Park made available to hunters. Open primitive zone to hunters during general big game season.

7. Cave Management

2000 - Begin gathering research materials on limits of acceptable change. Begin collecting environmental data on cave. Limit cave tour size to 30.

2001 - Conduct Park-wide geophysical inventory of cave resources in Park.

2002 - Hire intern to inventory cave biodiversity.

2003 - Prepare cave management planning report. Begin implementation of limits of acceptable change monitoring and reporting.

2004 - Install new doors on exit tunnel. Install new hand rails in cave

2006 - Upgrade electrical system in cave.

8. River Access

2002 - Secure funding for the design and construction of the Limespur FAS. Develop a formal master site plan for the new access area.

2003 - Award Construction contract and begin construction. Install additional interpretive information for Bicentennial in cooperation with the BLM. Incorporate FAS into maintenance plan and Caverns operations budget.

9. Public Contact Center and Park Maintenance

2005 - Secure funding for the project. Develop master site plan for the new facility by Design and Construction Bureau.

2006 - Award contract and begin construction.

2007 - Open to the public.

10. Bighorn Sheep

2000 - Park staff/Citizens Advisory Committee support for the future reintroduction of Bighorn Sheep is brought to the attention of the Wildlife Division.

Monitoring

Park staff will meet periodically with staff from the Region 3 and Helena Offices to monitor implementation progress, and make any necessary revisions to this timeline. This Plan is intended to have a ten-year life, although some course adjustments are likely before the timeframe expires.

FUTURE STAFFING PROPOSALS

The following proposals for increased staffing are based on the need for enhanced administrative, visitor service, maintenance, and interpretive capabilities. These staffing needs are associated with the expected increase in visitation related to the new programs and facilities envisioned over the next ten years, and are necessary to help implement this Plan.

Proposal 1 - Acquire an additional .23 seasonal FTE (full-time equivalent--grade 6) for enhanced tour related operations and opportunities. These duties include the the following: development and implementation of guided nature walks along the new Greer Gulch Loop Nature Trail; enable the Park to continue to offer special early season educational tours for school groups without having to deny requests due to inadequate staffing (school group tour numbers continue to increase yearly); and to provide adequate staffing for the special holiday candlelight tours, which are also greatly increasing in popularity. This proposal serves to address the emphasis areas of enhanced and sustained tour-related opportunities, the promotion of continuing youth education programs, and the concept of a quality visitor experience by providing a diversity of recreational opportunities.

Proposal 2 - Acquire an additional .18 permanent FTE (grade 11) to allow the Park to have a full-time year-round maintenance foreman. Currently the maintenance foreman position is funded for 10 months of the year. This proposal is necessary to fulfill the increased maintenance needs associated with the expansion of recreational opportunities outlined in this Plan, and to address the need for developing and implementing a Park maintenance management plan. Specific maintenance requirements to justify a full-time maintenance foreman are related to the following: development and maintenance of new trails; increased off-season campground and

camping cabin use; water system operation and monitoring; and the need for year-round road maintenance. This proposal addresses the emphasis areas of sustained maintenance associated with increased recreational opportunities, and the provision of a quality visitor experience.

Proposal 3 - Acquire an additional .14 grade 8 administrative aid FTE to enhance the existing position (.36 FTE) related to management/supervision of the following: the Park's volunteers; tourism and marketing; the Park's educational trunk; special guided nature walks; and public relations programs. The position specifically addresses the emphasis areas of enhanced interpretation, public education and information, campground/information center visitor services and operations, and Park volunteer services. This position would provide the technical, administrative, management, planning, and supervisory expertise necessary to accomplish tasks that directly shape the experience of Park visitors, making their visit a positive event.

PARK BOUNDARY SURVEY

To effectively implement the programs and provisions outlined in this Plan, a legal survey of the Park boundary must be conducted. This will allow for the management of public access and Park resources as they relate to issues such as trails, trail use, hunting, and cattle trespass. Included in this survey project will be an accurate re-delineation of the boundary with official FWP property signs, new or repaired fencing, and new or repaired gates on all primitive roads and access points.

Records suggest that the Park boundary has not been surveyed since the late 1930s. The last known comprehensive survey of the boundary on record was conducted by the National Park Service before Lewis and Clark Caverns was officially designated a state park.

It is estimated that this survey project will cost approximately $15,000 with the utilization of the latest global positioning system technology (GPS). Approximately two months would be needed to complete the project. This project will continue to be submitted as a future capital project request.

ENVIRONMENTAL REVIEW

As required under the Montana Environmental Protection Act (MEPA), environmental review for the preferred options discussed in this Plan will be completed on a project-by-project basis—as applicable--prior to project implementation. Some projects may trigger the additional requirements associated with House Bill 495; as appropriate, these will be folded in to the project-specific environmental review process.

State Historic Preservation Office (SHPO) clearance is required for all projects on state park lands that may potentially affect historic or cultural resources. Cultural clearance from SHPO will be sought on a project-by-project basis .

A number of the projects included as part of campground improvement issue received funding authorization during the 1999 Legislative Session, and have already gone through MEPA environmental review.

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APPENDICES
(Draft—2/25/2000)

A) Park Facilities Chart
B) Original Management Plan Alternatives
C) Land Acquisition Priorities
D) Park Hunting Information
E) Vascular Plant List
F) Wildlife Species List
G) Summary of Park Visitor Survey Results

APPENDIX A:

Park Facilities Chart

Montana State Parks Attribute Inventory

Name of State Park: LEWIS & CLARK CAVERNS

Name of Recreation Site: LEWIS & CLARK CAVERNS

Date of Inventory: 12/18/95

File No.: 3002 County: 22

Lat.: 45 , Min 31 , Sec: 49, Long.: 111 , Min.: 51 , Sec.: 3

FWP Region: 3 Waterbody: Jefferson River

Operating Season: Opening Date: Closing Date:

Total Size of Area: 3005 (acres) Year of Establishment: 1937

Signs	Quantity	Handicapped
531 Highway Approach:	7	
532 Entrance (park):	4	
533 Information/Orientation:	81	
534 Regulations:	18	
535 Directions:	7	
Interpretive Facilities		
440 Visitor/Interp. Center, Sq. Feet:	2471.00	
441 Museum, Sq. Feet:	0.00	
442 Amphitheater, Seating Capacity:	88	0
443 Self Service Guide Books:	1	
444 Bulletin Boards:	5	
445 Historic Buildings:	2	0
Administrative Sites		
456 Offices, Number of Offices:	2	
457 Housing Number of Buildings:	0	
458 Storage Buildings, Number of Buildings:	3	
471 Iron Ranger Fee Station:	2	
472 Staffed	2	
473 Wall Mounted Lock Fee Box:	0	
474 Campground Host Site, With Hookups:	2	
475 Campground Host Site, Without Hookups:	0	
Grounds		
605 Garbage Cans:	41	
606 Garbage Dumpsters:	0	
Campgrounds		
621 Developed Campsites:	40	0
622 Basic Campsites:	0	0
623 Primitive Campsites:	4	0
663 Campsites with Electrical Outlets:	3	0

	Quantity	Handicapp
662 Picnic Shelters, Number at Campsites:	0	0
625 Concrete Picnic Table, Number at Campsites:	0	0
626 Pipe Frame Picnic TAble, Number at Campsites:	12	0
627 All Wood Picnic Table, Number at Campsites:	37	0
628 Fire Ring, Number at Campsites:	10	0
629 Pedestal Fire Grill, Number at Campsites:	29	0
630 Unofficial Fire Rings, Total Number at Rec. Area:	0	0
631 Concrete Grills:	1	0
Picnic Sites		
624a Picnic Sites:	13	0
624b Group Picnic Sites:	0	0
662 Picnic Shelters:	0	0
663 Picnic Sites With Electrical Outlets:	0	0
625 Concrete Picnic Table, Number at Picnic Sites:	0	0
626 Pipe Frame Picnic Table, Number at Picnic Sites:	7	0
627 All Wood Picnic Table, Number at Picnic Sites:	6	0
628 Fire Ring, Number at Picnic Sites:	0	0
629 Pedestal Fire Grill, Number at Picnic Sites:	5	0
631 Concrete Grills:	5	0
Toilets and Water Supply		
411 Flush, Number of Buildings:	4	0
412 Vault, Number of Buildings:	5	0
421a Pump, Number of Working Pumps:	6	0
421b Gravity, Number of Spigots:	32	0
422 Sanitary Dump Stations:	1	
425 Fish Cleaning Stations, Number of Buildings:	0	0
426 Outdoor Light Fixtures:	0	
Roads/Parking		
510 Road - Asphalt, Miles:	3.65	
511 Road - Aggragate, Miles:	1.35	
514 Vehicle Bridge, Number:	1	
518 Parking - Asphalt, Square Feet:	32076	
519 Parking - Aggregate, Square Feet:	58895	
Trails		
520 Trails, Miles Designated, All Types:	3.75	
520a Equestrian, Miles Designated From 520:	0.00	
520b Hiking, Miles Designated, From 520:	2.10	
520c Bicycle, Miles Designated, From 520:	0.00	
525 Foot Bridge, Number:	7.00	
526 Trail Benches, Number:	40	
Boating/Swimming Facilities		
633 Boat Dock, Square Feet:	0	0
634 Boat Ramp - Paved, Number of Lanes:	0	
635 Boat Ramp - Unpaved, Number of Lanes:	0	
636 Lake Shoreline, Miles:	0.00	

	Quantity	Handicapped
637 Designated Beach Area, Feet:	0	
Other Ground Improvements		
645 Gate - Park Entrance:	1	
647 Gate - One Way Vehicle (tire ripper):	0	
648 Cattle Guard/Livestock:	0	
649 Traffic Counter:	1	
Organized Games and Sports Facilities		
651 Playground Equipment, Number of Pieces:	0	
652 Volleyball Court, Number:	0	
653 Softball Field, Number:	0	
654 Horseshoe Pit, Number:	0	
Other 400's		
480 Fee Box for Firewood:	1	
481 Propane Tank for Restroom Hot Water:	0	
482 Drinking Fountain:	7	
483 Pay Phone:	3	
484 Changing House For Beach:	0	
485 Cemetary/Memorials/Statues:	0	
486 Flag Pole:	3	
487 Information Shelter:	0	
488 Concession Stand/Building:	1	
489 Shelter Building:	0	
490 Bicycle Rack:	0	
491 Concrete Picnic Table Pads:	0	
492 Fire Hydrant:	0	
493 Pumphouse:	2	
Other 500's		
590 Picnic Shelter Benches:	0	
591 Paved Walkway (feet):		0
592 Handicap Parking Space With Sign:		6
593 Brochure Stands:	2	
Other 600's		
680 Boat Dock Benches:	0	
681 Floating Swimming Platform:	0	
682 Corral:	0	
683 Other Gates:	5	
684 Archery Range:	0	
685 Rifle Range:	0	
686 Wheelchair Fishing Platform:	0	
687 Barbeque Grill:	0	
688 Campfire Benches:	0	

APPENDIX B:

Original (Draft) Management Plan Alternatives

ORIGINAL MANAGEMENT PLAN ALTERNATIVES

In the first draft of the Lewis and Clark Caverns State Park Management Plan (1997), an environmental assessment was attached to the Plan, which was meant to cover all presented issues with a "blanket" approach. This earlier version of the Plan was not approved, and it was later determined that this blanket approach to environmental review was not the best way to proceed. Instead, individual environmental assessments will be completed for each project--where relevant--at the time of project implementation.

The chart on the following page illustrates the issues and alternatives presented in the first draft, which in some cases are different from the ones included in this version. They are presented here as a record of the evolving planning process.

The original plan issues had been combined to form three broad management alternatives, as follows:

Alternative A - Existing Park Recreational Opportunity Spectrum (no action alternative)
Alternative B - Enhanced Park Recreational Opportunity Spectrum I
Alternative C - Enhanced Park Recreational Opportunity Spectrum II

Based on public comments received and internal FWP review, alternative B (enhanced recreational opportunity spectrum I) was selected as the preferred alternative in the previous draft.

Issues dealing with Lewis and Clark Bicentennial planning, land acquisition, and bighorn sheep reintroduction are missing from the chart. These issues were added to the current draft as new issues, following a series of meetings with the Citizens Advisory Committee. It is important to also note that the current preferred options for trail use, campground improvements, hunting, cave management and the public contact center/entrance station have all changed from the earlier draft. One issue in the first draft (studying the need for additional private concession offerings) was eliminated in this Plan because of confusion about its intent by members of the private business community.

SUMMARY OF MANAGEMENT PREFERRED OPTIONS

Issue	A (no action)	B (preferred)	C
1) New Trails	Nature trail complex only (existing)	Full development of all potential trails	Development of only major trail corridor
2) Trail Use	No new	Hiking only	Hiking/horse-designated trails
3) Campground/ Cabins	No new developments	Group use/ playground/ amphitheater lighting	Relocate existing three cabins to N. of campground
4) Hunting	No hunting	Developed mgmt. zone & semi-developed zone closed; primitive mgmt. zone open	Developed mgmt. zone, semi-developed mgmt. zone open except safety zones with weapon restrictions; primitive zone open.
5) Cave Tours	No change: 35 max. group size, no age limit	Max. group size 30, no age limit	Max. group size 30, no children under 5 on tours
6) Cave	No public off-trail tours	Offer special off-trail public tours	---
7) River Access	No developed access	Close existing informal access, develop new access with parking, boat ramp, rest room	Develop new access/improve existing informal access
8) Concessions	No new concessions	Investigate dog kennel, maintenance, day care, rec/game equipment rental ideas, etc.	---
9) Center/Shop/ Entrance Sta.	No change	New lower public contact center/ entrance sta./shop	Upgrade A-Frame, new entrance sta.

APPENDIX C:

Land Acquisition Priorities

LAND ACQUISITION PRIORITIES

Priority 1.

Name: Riverside Placer
Location: Sec. 17, 18 & 19; T1N, R2W
Sec. 13 & 24; T1N, R3W
Acres: 82.09

This property is immediately adjacent to the Park boundary and the Jefferson River. The property is bordered by BLM land and the Altamont Placer (priority 2). The only possible trail route to Sheep Gulch runs through this property and the Altamont Placer property. A trail has been proposed to Sheep Gulch in the Park Management Plan. It would serve as a main access corridor to the western half of the Park. The potential exists that this property could be sold and developed in some way, possibly for its mineral deposits. Development of this property would seriously detract from the natural, primitive character of the western portion of the Park, currently designated as a primitive management zone in the Park's Management Plan. It would also preclude public access to the Sheep Gulch area and a two-mile stretch of the river access. The scenic character of the Jefferson River canyon would also be compromised if this property were developed. Note that priority 1 and priority 2 are directly related in that access to the Sheep Gulch area is not possible without passing through both properties.

Priority 2.

Name: Altamont Placer
Location: Sec. 18, T1N, R2W, (lots 5,6,8)
Acres: 120

The Altamont Placer is located adjacent to the main access to the Sheep Gulch area of Lewis and Clark Caverns State Park. The only possible trail route to Sheep Gulch runs through the property. A trail has been proposed to Sheep Gulch as outlined in the trail development section of the Park Management Plan. It would serve as a main access corridor to the western half of the Park. The potential exists that this property could be sold and developed in some way, possibly for its mineral deposits. Development of this property in any manner would seriously detract from the natural, primitive character of the western portion of the Park, currently designated as a primitive management zone in the Park's Management Plan. It would also preclude public access to the Sheep Gulch area. The property also has historical and natural significance. The large man made quarries on the property were originally owned by Mr. Dan Morrison, the original developer of Lewis and Clark Caverns (then known as Morrison Cave). These quarries are found in the same geologic formation which contains Lewis & Clark Caverns.

Priority 3.

Name: Lot 9
Location: Sec. 13, T1N, R3W
Acres: 8.66

The above property is immediately adjacent to the Park boundary. This lot is located between the Park boundary and the Riverside Placer. The property is bordered on the north by Bureau of Land Management (BLM) land. The potential exists that this property could be sold and developed in some way, possibly for its mineral deposits. Development of this property in anyway would seriously detract from the natural, primitive character of the western portion of the Park, currently designated as a primitive management zone in the Park's Management Plan. The scenic character of the Jefferson River Canyon would also be compromised if this property were developed.

Priority 4.

Name: Dawson Ranch property
Location: S Quarter of SW Quarter of Sec. 9; T1N, R2W
Acres: estimated at 40 acres

The property in question, although owned by the Dawson ranch, is not utilized for livestock grazing purposes. The land is steep and wooded with little potential forage for cattle. This is a significant property in that several hundred feet of the existing main Park access road crosses the state property line by several feet, with a portion of the road actually on the Dawson property. The Dawson's are aware of this abnormality. They have not indicated this issue as a problem they are concerned with, at least for the present time. The 40 or so acres in question, if acquired by FWP, would encompass the Park road and extend the Park boundary to the top of the cave mountain ridge and would serve as an ideal natural boundary for the Park in that immediate area.

Priority 5.

Priority five involves the purchase of approximately 30 acres of property from James and Maxiene Molenda. The property is located to the south of the Park entrance area and constitutes a narrow strip of land between the existing Park land on the south side of Highway 2 and the Jefferson River.

Priority 6.

Priority six involves the purchase of approximately one section (640 acres) of KG Ranch property bordering the Park to the northeast (south half of section 10, north half of section 15: T1N,R2W). The acquisition of this property would protect the entire Greer Gulch watershed. Greer Gulch provides the water for the Park's drinking water system.

In addition to the specific priorities listed above, the Citizens Advisory Committee suggested investigating the possibility of a cooperative rail-trail project on the opposite side of the Jefferson River from the Park, along the old Milwaukee Road corridor (assuming willing sellers).

APPENDIX D:

Park Hunting Information

PARK HUNTING INFORMATION

Lewis and Clark Caverns State Park is contained within Region 3's administrative deer and elk hunting district 333. Limited biological data has been obtained in the area of the Park, but information concerning wildlife species occupying the Park and data from the hunting district are available. The elk population that uses the Park summers in the area, primarily between Interstate 90 and Montana Highway 2. Elk winter primarily to the east and north of the Park. Mule deer and a limited number of white-tailed deer reside in the Park yearlong. Mule deer population trend surveys for this hunting district have not been conducted in recent years, but past data indicate a high stable population, with prevalent game damage. Moose and mountain goats are found in the area, though data on their abundance is not currently available.

The Park includes populations of blue, sharptail, and sage grouse, as well as hungarian partridge. No population estimates are available for the above grouse species. Turkeys released near Cardwell and Willow Creek are now present in the Park and are sighted on a regular basis. Turkey nesting activity has been verified in the Park.

At present there is no formal inventory of trophy animals, nongame species, predators, or furbearers for the area encompassing the Park. The Park provides excellent habitat for mountain lion, bobcat, and other furbearers. Several species of raptors occupy the Park and numerous species of neotropical songbirds. There is a healthy population of antelope in the surrounding hunting district. Antelope probably do not occupy the Park itself on a regular basis because of the lack of wide open gentle topography needed for escape purposes.

Private landowners in the hunting district are concerned with the effects of elk and mule deer damage on their ranching operations. Some of these landowners believe that because Lewis and Clark Caverns State Park is closed to hunting, elk move into the Park to escape hunters. Therefore, they feel an adequate harvest of elk is not being obtained. FWP has increased antlerless elk permits in the hunting district to address these concerns and has made it an objective to reduce the number of elk in the area. In addition, FWP has radio collared three elk in the Park area in an attempt to answer the question of whether elk do indeed refuge in the Park during hunting season.

Some of the private landowners in the London Hills and the north end of the Tobacco Root Mountains have been the primary complainants regarding damage from mule deer. The Department recognizes that there has been a problem with deer in this hunting district.

Other items related to the hunting issue are listed below:

1. Upland gamebird and big game hunting will be governed by the regular season rules and regulations for the hunting district that encompasses the Park (district 333). There would be no early archery season or early bird season. This is necessary due to an increase in shoulder season (September) visitation by school groups and the general public.

2. Access to areas of the Park open to hunting would be walk-in only, including game retrieval, from selected access areas located along Montana Highway 2.

3. Hunting would be permitted as long as it does not conflict with the main purpose and mission of the Park.

4. Hunting should be considered as a management action to control game populations and decrease the potential for game damage to adjacent private lands. It would be an additional recreational opportunity offered in the Park as long as the activity does not conflict with other recreational uses.

5. Opening the western portion of the Park to hunting would help to fulfill FWP's Goal A, which states the following: "Manage with a focus on ecological systems to reflect the diversity of all wildlife and their habitats while maintaining our commitment to Montana's hunting and fishing heritage." The Department's Goal B states that FWP will "provide increased opportunities for public enjoyment of fish, wildlife, and parks resources while maintaining our commitment to improve landowner-sportsperson-department relations." Enforcement patrols would be carried out by the District Game Warden at their discretion. Patrols could be on infrequent basis throughout the hunting season. The District Warden would prioritize the need for park patrols on a day-to-day basis.

   Related to enforcement will be the requirement of adequately signing the areas of the Park open to hunting. Designated hunter parking areas and access points would be identified with informational bulletin boards placed at all hunter access points.

6. Hunters will be subject to all applicable Park user fees (day use and overnight camping). Camping is allowed only in the Park campground.

7. Access to open areas, including surrounding private land for hunting purposes, as well as retrieval of legally taken game animals from open areas will not be allowed through the hunting closure zone of Lewis and Clark Caverns State Park

8. Trapping is not allowed in the Park.

APPENDIX E:

Known Vascular Plants of Lewis and Clark Caverns State Park

KNOWN VASCULAR PLANTS OF LEWIS AND CLARK CAVERNS STATE PARK

PTERIDOPHYTES (FERNS AND THEIR ALLIES)

Polypodiaceae (Maidenhair Family)

Lip fern *(Cheilanthes feei)*

Polypodiaceae(Spleenwort Family)

Bladder fern *(Cystopteris fragilis)*

GYMNOSPERMS (CONIFERS)

Cupressaceae (Juniper Family)

Common juniper *(Juniperus communis)*
Rocky mountain juniper (*Juniperus scopulorum)*

Pinaceae (Pine Family)

Douglas fir *(Pseudotsuga menziesii)*
Ponderosa pine *(Pinus ponderosa)*
Limber pine *(Pinus flexilis)*

ANGIOSPERMS (FLOWERING PLANTS)

Aceraceae (Maple Family)

Rocky mountain maple *(Acer glabrum)*

Anacardiaceae (Sumac Family)

Sumac *(Rhus trilobata)*

Apiaceae (Carrot Family)

Cow parsnip *(Heracleum sphondylium)*
Biscuitroot *(Lomatium triternatum)*
Sweet cicely (Osmorhiza depauperata

Asteraceae (Sunflower Family)

Yarrow *(Achillea millefolium)*
Pussy-toes *(Antennaria microphylla)*
(Antennaria parvifolia)
Pink pussy-toes *(Antennaria rosea)*
Heart-leaved arnica *(Arnica cordifolia)*
Arnica *(Arnica fulgens)*
Hawksbeard *(Crepis acuminata)*
Cut-leaved daisy *(Erigeron compositus)*
Goldenweed *(Haplopappus acaulis)*
Golden aster *(Heterotheca horrida)*
Groundsel *(Senecio canus)*
Tall butterweed *(Senecio serra)*
Dandelion *(Taraxacum officinale)*
Goatsbeard *(Tragopogon dubius)*

Boraginaceae (Borage Family)

Miner's candle *(Cryptantha sp.)*
Hound's tongue *(Cynoglossum officinale)*
Stick seed *(Lappula redowskii)*
Stone seed *(Lithospermum ruderale)*
Bluebells *(Mertensia ciliata)*
(Mertensia oblongifolia)

Brassicaceae (Mustard Family)

Alyssum *(Alyssum alyssoides)*
Rock cress *(Arabis holboellii)*
(Arabis microphylla)
(Arabis nuttallii)
Whitlow grass *(Draba oligosperma)*
Penny cress *(Thlaspi arvense)*
Tumble mustard *(Sisymbrium loeselii)*

Cactaceae (Cactus Family)

Prickly pear *(Opuntia spp.)*
Pin cushion *(Opuntia spp.)*

Caprifoliaceae (Honeysuckle Family)

Snowberry *(Symphoricarpus albus)*

Caryophyllaceae (Pink Family)

Chickweed (*Cerastium arvense)*

Centaurea (Family Asteraceae)

Spotted knapweed *(Centaurea maculosa)*

Chenopodiaceae (Goosefoot Family)

Goosefoot *(Chenopodium sp.)*
Winterfat *(Ceratoides lanata)*

Cornaceae (Dogwood Family)
Dogwood *(Cornus canadensis)*
Red-osier dogwood *(Cornus stolonifera)*

Crassulaceae (Stonecrop Family)

Stonecrop *(Sedum lanceolatum)*

Cyperaceae (Sedge Family)

Sedges *(Carex spp.)*

Fabaceae (Bean Family)

Lupine *(Lupinus sp.)*

Fumariaceae (Fumitory Family)

Corydalis *(Corydalis aurea)*

Grossulariaceae (Currant Family)

Currant *(Ribes cereum)*
Gooseberry *(Ribes setosum)*

Hydrangeaceae (Mock Orange Family)

Mock orange *(Philadelphus lewissi)*

Hydrophyllaceae (Waterleaf Family)

Phacelia *(Phacelia linearis)*

Lamiaceae (Mint Family)

Mint *(Mentha spp.)*
Horsemint *(Monarda Menthaefolia)*

Liliaceae (Lily Family)

False solamons seal *(Smilacina racemosa)*
Wild onion *(Allium textile)*
Fairy bell *(Disporum trachycarpum)*
Fritillary *(Fritillaria atropurpurea)*
False lily of the valley *(Maianthemum stellatum)*

Orobanchaceae (Broomrape Family)

Broomrape *(Orobanche fasciculata)*

Plantaginaceae (Plantain Family)

Plantain *(Plantago patagonica)*

Poaceae (Grass Family)

Crested wheatgrass *(Agropyron cristatum)*
Blue grama *(Bouteloua gracilis)*
Cheatgrass *(Bromus tectorum)*
Great basin wild rye *(Elymus cincereus)*
Quackgrass *(Elymus repens)*
Bluebunch wheatgrass *(Elymus spicatus)*
Bulbous bluegrass *(Poa bulbosa)*
Needle-and-thread *(Stipa comata)*
Needle grass *(Stipa nelsonii)*

Polemoniaceae (Phlox Family)

Collomia *(Collomia linearis)*
Phlox *(Phlox sp.)*

Polygonaceae (Buckwheat Family)

Buckwheat *(Eriogonum ovalifolium)*
(Eriogonum umbellatum)
Knotweed *(Polygonum douglasii)*

Portulacaceae (Purslane Family)

Minor's lettuce (Montia chamissoi)

Primulaceae (Primrose Family)

Baneberry *(Family Ranunculaceae)*

Ranunculaceae (Buttercup Family)

Windflower *(Anemone lithophila)*
Larkspur *(Delphinium sp.)*
(Delphinium bicolor)
(Delphinium andersonii)

Rosaceae (Rose Family)

Curl-leaf mountain mahogany *(Cercocarpus ledifolius)*
Strawberry *(Fragaria vesca)*
Avens *(Geum aleppiccum)*
Rock mat *(Petrophyton caespitosum)*
Cinquefoil *(Potentilla glandulosa)*
Chokecherry *(Prunus virginiana)*
Wood rose *(Rosa woodsii)*
Prickly rose *(Rosa sayi)*
Raspberry *(Rubus idaeus)*

Rubiaceae (Madder Family)

Bedstraw *(Galium boreale)*
(Galium triflorum)

Salicaeae (Willow Family)

Narrowleaf cottonwood *(Populus angustifolia)*
Quaking aspen *(Populus tremuloides)*
Black cottonwood *(Populus balsamifera)*

Scophulariacea (Saxifrage Family)

Blue-eyed Mary *(Collinsia parviflora)*
Stiff-leaved penstemon *(Penstemon aridus)*
Fuzzy-tongue penstemon *(Penstemon eriantherus)*
Mullein *(Verbascum thapsus)*

Urticaceae (Nettle Family)

Stinging nettle *(Urtica dioica)*

Valerianaceae (Valerian Family)

Valerian *(Valeriana dioica)*

Violaceae (Violet Family)

Early blue violet *(Viola adunca)*
Bog violet *(Viola nephrophylla)*
Fringed sage *(Artemesia spp.)*
Black sage *(Artemesia spp.)*
Big sage *(Artemesia Tridentata)*
Musk thistle *(Carduus nutans)*
False yarrow *(Chaenactis douglasii)*
Rabbitbrush *(Chrysothamnus viscidiflorus)*
Canada thistle *(Cirsium arvense)*
Thistle *(Cirsium undulatum)*
Giant hyssop *(Agastache urticifolia)*

APPENDIX F:

Known Wildlife Species of Lewis and Clark Caverns State Park

The following is a list of know wildlife species found in the park or immediate surrounding area. This list is not complete and is updated as new species are identified.

Birds:

Lewis and Clark Caverns State Park and Vicinity Bird List

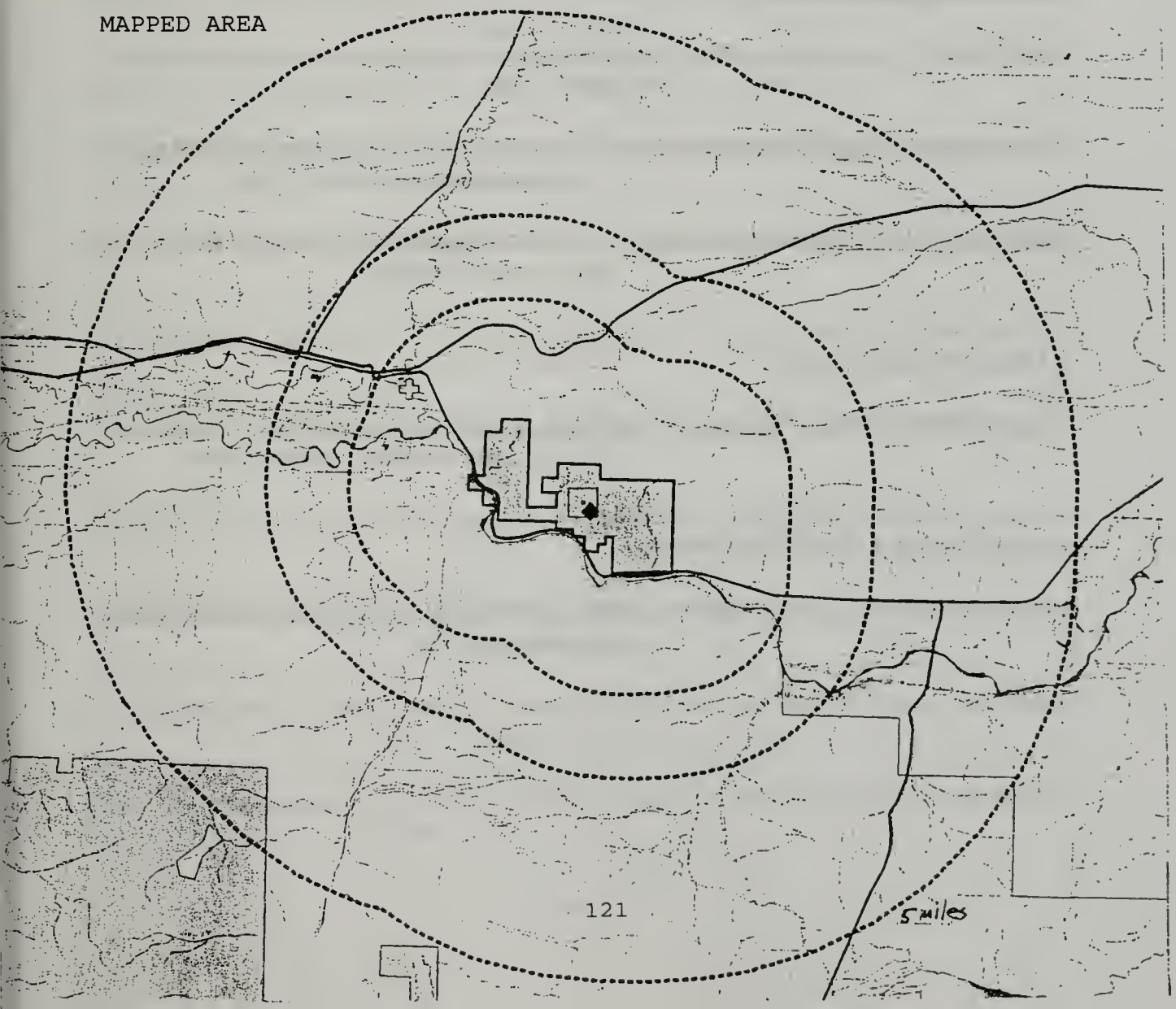
KEY:

Highlighted records indicate this species has been sighted within Lewis and Clark Caverns State Park.

Records not highlighted indicate this species has been sighted within the mapped area but not within Lewis and Clark Caverns State Park

Records not highlighted with * indicate species has been sighted near the mapped area but not confirmed within mapped area.

MAPPED AREA



KNOWN WILDLIFE SPECIES IN LEWIS AND CLARK CAVERNS STATE PARK

Distribution of Birds in or around Lewis and Clark Caverns State Park:

KEY: Records with * indicate species has been sighted near the mapped area but not confirmed within mapped area.

FAMILY GAVIIDAE

Common Loon* *(Gavia immer)* - uncommon migrant (fall/spring) breeding records exist for Montana; unverified in Park

FAMILY PODICIPEDIDAE

Eared Grebe* *(Podiceps nigricollis)* - uncommon migrant (fall/spring) breeding records exist; unverified in Park

Western Grebe* *(Aechmophorus occidentails)* - uncommon migrant (fall/spring) breeding records exist; unverified in Park

Pied-billed Grebe* *(Podilymbus podiceps)* - uncommon migrant (fall/spring) breeding records exist; unverified in Park

FAMILY PELECANIDAE

American White Pelican *(Pelecanus erythrorhynchos)* - common summer bird; breeding records exist; verified in Park

FAMILY PHALACROCORACIDAE

Double-crested *(Phalacrocorax auritus)* - common summer bird; Cormorant breeding records exist; verified in Park

FAMILY ARDEIDAE

Great Blue Heron *(Ardea herodias)* - common; summer, winter and breeding records; verified in Park

FAMILY ARDEIDAE

American Bittern* *(Botaurus lentiginosus)* - uncommon summer bird; breeding records exist; unverified in Park

FAMILY ANATIDAE

Tundra Swan *(Cygnus columbianus)* - uncommon migrant (spring/fall) winter records exist; unverified in Park

Canada Goose *(Branta canadensis)* - common summer bird; winter and breeding records exist; verified in Park

Snow Goose *(Chen caerulescens)* - uncommon migrant; unverified in Park

Mallard *(Anas platyrhynchos)* - common summer bird; winter and breeding records exist; verified in Park

Gadwall *(Anas strepera)* - uncommon summer bird; winter and breeding records exist; unverified in Park

Northern Pintail *(Anas acuta)* - uncommon summer bird; winter and breeding records exist; verified in Park

Green-winged Teal *(Anas crecca)* - uncommon migrant; winter and breeding records exist; verified in Park

Blue-winged Teal *(Anas discors)* - uncommon summer bird; breeding records exist; verified in Park

Cinnamon Teal *(Anas cyanoptera)* - uncommon summer bird; breeding and winter records exist; verified in Park

Northern Shoveler (Anas clypeata) - uncommon summer bird; breeding and winter records exist; verified in Park

Wood Duck *(Aix sponsa)* - uncommon summer bird; breeding and winter records exist; verified in Park

Redhead* *(Aythya americana)* - uncommon summer bird; breeding and winter records exist; unverified in Park

Ring-necked duck *(Aythya collaris)* - uncommon migrant; breeding and winter records exist; unverified in Park

Canvasback *(Aythya valisineria)* - uncommon migrant; breeding and winter records exist; verified in Park

Lesser Scaup* *(Aythya affinis)* - uncommon migrant; breeding and winter records exist; unverified in Park

Common Goldeneye *(Bucephala clangula)* - uncommon migrant; breeding and winter records exist; verified in Park

Barrow's Goldeneye* *(Bucephala islandica)* - uncommon migrant; breeding and winter records exist; unverified in Park

Bufflehead* *(Bucephala albeola)* - uncommon migrant; breeding and winter records exist; unverified in Park

Ruddy Duck *(Oxyura jamaicensis)* - uncommon migrant; breeding and winter records exist; unverified in Park

Common Merganser *(Mergus merganser)* - common summer bird; winter and breeding records exist; verified in Park

Hooded Merganser *(Lophodytes cucullatus)* - uncommon migrant; breeding and winter records exist; unverified in Park

Red-brested Merganser *(Mergus serrator)* - uncommon migrant; winter records exist; verified in Park

FAMILY CATHARTIDAE

Turkey Vulture *(Cathartes aura)* - common summer bird; breeding records exist; verified in Park

FAMILY ACCIPITRIDAE

Northern Goshawk *(Accipiter gentilis)* - common summer bird; breeding and winter records exist; verified in Park

Sharp-shinned Hawk *(Accipiter striatus)* - uncommon summer bird; breeding and winter records exist; verified in Park

Cooper's Hawk *(Accipiter cooperii)* - uncommon summer bird; breeding and winter records exist; verified in Park

Red-tailed Hawk *(Buteo jamaicensis)* - common summer bird; breeding and winter records exist; verified in Park

Swainson's Hawk *(Buteo swainsoni)* - uncommon summer bird; breeding records exist; verified in Park

Ferruginous Hawk* *(Buteo regalis)* - uncommon summer bird; breeding records exist; unverified in Park

Rough-legged Hawk *(Buteo lagopus)* - common winter bird; verified in Park

Northern Harrier *(Circus cyaneus)* - common summer bird; breeding and winter records exist; verified in Park

Subfamily Accipitrinae

Golden Eagle *(Aquila chrysaetos)* - uncommon summer bird; winter and breeding records exist; verified in Park

Bald Eagle *(Haliaeetus leucocephalus)* - uncommon; summer, winter and breeding records exist; verified in Park

Subfamily Pandioninae

Osprey *(Pandion haliaetus)* - uncommon summer bird; breeding records exist; verified in Park

FAMILY FALCONIDAE

Prairie Falcon *(Falco mexicanus)* - uncommon summer bird; breeding and winter records exist; verified in Park

Peregrine Falcon *(Falco peregrinus)* - uncommon migrant; breeding and winter records exist; verified in Park

Merlin *(Falco columbarius)* - uncommon summer bird; breeding and winter records exist; verified in Park

American Kestrel *(Falco sparverius)* - common summer bird; breeding and winter records exist; verified in Park

FAMILY PHASIANIIDAE

Merriam's Turkey *(Meleagris gallopavo)* - uncommon; summer, winter and breeding records exist; verified in Park

Ring-necked Pheasant *(Phasianus colchicus)* - common; summer, winter and breeding records exist; verified in Park

Subfamily Tetraoninae

Sharp-tailed Grouse *(Tympanuchus phasianellus)* - uncommon; summer, winter and breeding records exist; verified in Park

Blue Grouse (*Dendragapus obscurus)* - common, summer, winter and breeding records exist; verified in Park

Gray (Hungarian) Partridge *(Perdix perdix)* - common; summer, winter and breeding records exist; verified in Park

FAMILY GRUIDAE

Sandhill Crane *(Grus canadensis)* - common summer bird; breeding records exist; verified in Park

FAMILY RECURVIROSTRIDAE

American Avocet (Recurvirostra americana) - uncommon migrant; breeding records exist; verified in Park

FAMILY RALLIDAE

Virginia Rail *(Rallus limicola)* - uncommon summer bird; breeding and winter records exist; unverified in Park

Sora *(Porzana carolina)* - uncommon summer bird; breeding records exist; unverified in Park

American Coot *(Fulica americana)* - uncommon summer bird; breeding and winter records exist; unverified in Park

FAMILY CHARADRIIDAE

Killdeer *(Charadrius vociferus)* - common summer bird; breeding and winter records exist; verified in Park

FAMILY SCOLOPACIDAE

Long-billed Curlew *(Numenius americanus)* - common summer bird; breeding records exist; verified in Park

Solitary Sandpiper* *(Tringa solitaria)* - uncommon migrant; unverified in Park

Willet* *(Catoptrophorus semipalmatus)* - uncommon migrant; breeding records exist; unverified in Park

Greater Yellowlegs *(Tringa melanoleuca)* - uncommon migrant; unverified in Park

Lesser Yellowlegs *(Tringa flavipes)* - common migrant; unverified in Park

Marbled Godwit* *(Limosa fedoa)* - uncommon migrant; breeding records exist; unverified in Park

Subfamily Phalaropodinae

Common Snipe *(Gallinago gallinago)* - common summer bird; breeding and winter records exist; verified in Park

Spotted Sandpiper *(Actitis macularia)* - common summer bird; breeding records exist; verified in Park

Wilson's Phalarope *(Phalaropus tricolor)* - uncommon summer bird; breeding records exist; unverified in Park

Red-necked Phalarope* *(Phalaropus lobatus)* - uncommon migrant; unverified in Park

FAMILY LARIDAE Subfamily Larinae

California Gull *(Larus californicus)* - uncommon summer bird; breeding and winter records exist; unverified in Park

Ring-billed Gull* *(Larus delawarensis)* - uncommon migrant; breeding and winter records exist; unverified in Park

Franklin's Gull* *(Larus pipixcan)* - uncommon migrant; breeding records exist; unverified in Park

Bonaparte's Gull* *(Larus philadelphia)* - uncommon migrant; unverified in Park

Subfamily Sterninae

Common Tern* *(Sterna hirundo)* - uncommon migrant; breeding records exist; unverified in Park

Black Tern* *(Chlidonias niger)* - uncommon migrant; breeding records exist; unverified in Park

FAMILY COLUMBIDAE

Mourning Dove *(Zenaida macroura)* - common summer bird; breeding and winter records exist; verified in Park

Rock Dove *(Columba livia)* - common summer bird; breeding and winter records exist; verified in Park

FAMILY CUCULIDAE

Black-billed Cuckoo* *(Coccyzus erythropthalmus)* - uncommon summer bird; breeding records exist; unverified in Park

FAMILY STRIGIDAE

Western Screech Owl *(Otus kennicottii)* - uncommon summer bird; breeding and winter records exist; unverified in Park

Great Horned Owl *(Bubo virginianus)* - common summer bird; breeding and winter records exist; verified in Park

Northern Pygmy Owl *(Glaucidium gnoma)* -uncommon summer bird; breeding and winter records exist; verified in Park

Long-eared Owl *(Asio otus)* - uncommon summer bird; breeding and winter records exist; unverified in Park

Short-eared Owl *(Asio flammeus)* - uncommon summer bird; breeding and winter records exist; verified in Park

Northern Saw-Whet Owl* *(Aegolius acadicus)* - uncommon summer bird; breeding and winter records exist; unverified in Park

FAMILY CAPRIMULGIDAE

Common Nighthawk *(Chordeiles minor)* - common summer bird; breeding records exist; verified in Park

FAMILY APODIDAE

White-throated Swift *(Aeronautes saxatalis)* - common summer bird; breeding records exist; verified in Park

FAMILY TROCHILIDAE

Rufous Hummingbird *(Selasphorus rufus)* - uncommon migrant; breeding records exist; verified in Park

FAMILY ALCEDINIDAE

Belted Kingfisher *(Ceryle alcyon)* - common summer bird; breeding and winter records exist; verified in Park

FAMILY PICIDAE

Red-shafted northern flicker *(Colaptes auratus)* - common summer bird; breeding and winter records exist; verified in Park

Lewis' woodpecker *(Melanerpes lewis)* - uncommon summer bird; breeding and winter records exist; unverified in Park

Red-naped sapsucker* *(Sphyrapicus varius)* - uncommon summer bird; unverified in Park

Downy woodpecker *(Picoides pubescens)* - uncommon summer bird; breeding and winter records exist; verified in Park

Hairy woodpecker *(Picoides villosus)* - uncommon summer bird; breeding and winter records exist; verified in Park

FAMILY TYRANNIDAE

Eastern kingbird *(Tyrannus tyrannus)* - common summer bird; breeding records exist; verified in Park

Western kingbird *(Tyrannus verticalis)* - uncommon summer bird; breeding records exist; verified in Park

Says phoebe* *(Sayornis saya)* - uncommon summer bird; breeding records exist; unverified in Park

Willow flycatcher* *(Empidonax traillii)* - uncommon summer bird; breeding records exist; unverified in Park

Least flycatcher* *(Empidonax minimus)* - uncommon summer bird; breeding records exist; unverified in Park

Dusky flycatcher* *(Empidonax oberholseri)* - uncommon summer bird; breeding records exist; unverified in Park

Western wood peewee *(Contopus sordidulus)* - uncommon summer bird; breeding records exist; unverified in Park

Olive-sided flycatcher* *(Contopus borealis)* - uncommon summer bird; breeding records exist; unverified in Park

FAMILY ALAUDIDAE

Horned lark *(Eremophila alpestris)* - uncommon summer bird; breeding and winter records exist; verified in Park

FAMILY HIRUNDINIDAE

Violet-green swallow *(Tachycineta thalassina)* - common summer bird; breeding records exist; verified in Park

Tree swallow *(Tachycineta bicolor)* - common summer bird; breeding records exist; verified in Park

Bank swallow *(Riparia riparia)* - uncommon summer bird; breeding records exist; unverified in Park

Northern rough-winged swallow *(Stelgidopteryx serripennis)* - uncommon summer bird; breeding records exist; verified in Park

Barn swallow *(Hirundo rustica)* - common summer bird; breeding records exist; verified in Park

Cliff swallow *(Hirundo pyrrhonota)* - common summer bird; breeding records exist; verified in Park

FAMILY CORVIDAE

Grey jay *(Perisoreus canadensis)* - uncommon summer bird; breeding and winter records exist; verified in Park

Steller's jay *(Cyanocitta stelleri)* - uncommon summer bird; breeding and winter records exist; verified in Park

Black-billed magpie *(Pica pica)* - common summer bird; breeding and winter records exist; verified in Park

Common raven *(Corvus corax)* - common summer bird; breeding and winter records exist; verified in Park

American crow *(Corvus brachyrhynchos)* - common summer bird; breeding and winter records exist; verified in Park

Pinyon jay *(Gymnorhinus cyanocephalus)* - uncommon summer bird; breeding and winter records exist; verified in Park

Clark's nutcracker *(Nucifraga columbiana)* - common summer bird; breeding and winter records exist; verified in Park

FAMILY PARIDAE

Mountain chickadee *(Parus gambeli)* - common summer bird; breeding and winter records exist; verified in Park

Black-capped chickadee *(Parus atricapillus)* - uncommon summer bird; breeding and winter records exist; verified in Park

FAMILY TROGLODYTIDAE

House wren *(Troglodytes aedon)* - common summer bird; breeding records exist; verified in Park

Marsh wren* *(Cistothorus palustris)* - uncommon summer bird; breeding and winter records exist; unverified in Park

Canyon wren *(Catherpes mexicanus)* - uncommon summer bird; breeding and winter records exist; verified in Park

Rock wren *(Salpinctes obsoletus)* - uncommon summer bird; verified in Park; breeding records exist

FAMILY MIMIDAE

Gray catbird *(Dumetella carolinensis)* - common summer bird; breeding records exist; unverified in Park

Sage thrasher* *(Oreoscoptes montanus)* - uncommon summer bird; breeding records exist; unverified in Park

FAMILY MUSCICAPIDAE

American robin *(Turdus migratorius)* - common summer bird; breeding and winter records exist; verified in Park

Hermit thrush *(Catharus guttatus)* - uncommon summer bird; breeding and winter records exist; verified in Park

Swainson's thrush* *(Catharus ustulatus)* - uncommon summer bird; breeding records exist; unverified in Park

Veery *(Catharus fuscescens)* - uncommon summer bird; breeding records exist; unverified in Park

Mountain Bluebird *(Sialia currucoides)* - common summer bird; breeding records exist; verified in Park

Townsend's Solitaire *(Myadestes townsendi)* - uncommon summer bird; breeding and winter records exist; verified in Park

Subfamily Sylviinae

Ruby-crowned Kinglet *(Regulus calendula)* - uncommon summer bird; breeding and winter records exist; unverified in Park

FAMILY LANIIDAE

Loggerhead Shrike *(Lanius ludovicianus)* - uncommon summer bird; breeding records exist; unverified in Park

Northern Shrike *(Lanius excubitor)* - uncommon winter bird; unverified in Park

FAMILY STURNIDAE

European Starling *(Sturnus vulgaris)* - common summer bird; breeding and winter records exist; verified in Park

FAMILY BOMBYCILLIDAE

Cedar Waxwing *(Bombycilla cedrorum)* - uncommon summer bird; breeding and winter records exist; verified in Park

Bohemian Waxwing *(Bombycilla garrulus)* - common winter bird; breeding records exist; verified in Park

FAMILY VIREONIDAE

Red-eyed Vireo* *(Vireo olivaceus)* - uncommon summer bird; breeding records exist; unverified in Park

Warbling Vireo *(Vireo gilvus)* - common summer bird; breeding records exist; verified in Park

FAMILY EMBERIZIDAE

Orange-crowned Warbler* *(Vermivora celata)* - uncommon summer bird; breeding records exist; unverified in Park

Yellow Warbler *(Dendroica petechia)* - common summer bird; breeding records exist; verified in Park

Yellow-rumped Warbler *(Dendroica coronata)*- uncommon summer bird; breeding and winter records exist; verified in Park

MacGillivray's Warbler *(Oporornis tolmiei)* - uncommon summer bird; breeding records exist; unverified in Park

Common Yellowthroat *(Geothlypis trichas)* - common summer bird; breeding records exist; unverified in Park

Yellow-brested Chat* *(Icteria virens)* - uncommon summer bird; breeding records exist; unverified in Park

Wilson's Warbler *(Wilsonia pusilla)* - uncommon summer bird; breeding records exist; unverified in Park

American Redstart *(Setophaga ruticilla)* - uncommon summer bird; breeding records exist; verified in Park

FAMILY PASSERIDAE

House Sparrow *(Passer domesticus)* - common summer bird; breeding and winter records exist; verified in Park

FAMILY EMBERIZIDAE

Bobolink *(Dolichonyx oryzivorus)* - uncommon summer bird; breeding records exist; unverified in Park

Western Meadowlark *(Sturnella neglecta)* - common summer bird; breeding and winter records exist; verified in Park

Yellow-headed Blackbird *(Xanthocephalus xanthocephalus)* - uncommon summer bird; breeding and winter records exist; verified in Park

Red-winged Blackbird *(Agelaius phoeniceus)* - common summer bird; breeding and winter records exist; verified in Park

Northern (Bullocks) Oriole *(Icterus galbula bullockii)* - uncommon summer bird; breeding records exist; verified in Park (1999)

Brewer's Blackbird *(Euphagus cyanocephalus)* - common summer bird; breeding and winter records exist; verified in Park

Rusty Blackbird *(Euphagus carolinus)* - winter records exist; verified in Park

Common Grackle *(Quiscalus Quiscula)* - common summer bird; breeding and winter records exist; verified in Park

Brown-headed Cowbird *(Molothrus ater)* - breeding records exist; unverified in Park

Western Tanager *(Piranga ludoviciana)* - uncommon summer bird; breeding records exist; verified in Park

Black-headed Grosbeak* *(Pheucticus melanocephalus)* - uncommon summer bird; breeding records exist; unverified in Park

Lazuli Bunting *(Passerina amoena)* - uncommon summer bird; breeding records exist; unverified in Park

Green-tailed Towhee *(Pipilo chlorurus)* - common summer bird; breeding records exist; verified in Park

Rufous-sided Towhee *(Pipilo erythrophthalmus)* - common summer bird; breeding and winter records exist; verified in Park

Savannah Sparrow *(Passerculus sandwichensis)* - common summer bird; breeding records exist; unverified in Park

Grasshopper Sparrow* *(Ammodramus savannarum)* - uncommon summer bird; breeding records exist; unverified in Park

Vesper Sparrow *(Pooecetes gramineus)* - common summer bird; breeding records exist; verified in Park

Lark Sparrow* *(Chondestes grammacus)* - uncommon summer bird; breeding records exist; unverified in Park

Dark-eyed Junco *(Junco hyemalis)* - common summer bird; breeding and winter records exist; verified in Park

American Tree Sparrow *(Spizella arborea)* - common winter bird; verified in Park

Chipping Sparrow *(Spizella passerina)* - common summer bird; breeding and winter records exist; verified in Park

Brewer's Sparrow* *(Spizella breweri)* - uncommon summer bird; breeding records exist; unverified in Park

White-crowned Sparrow *(Zonotrichia leucophrys)* - uncommon summer bird; breeding and winter records exist; unverified in Park

Lincoln's Sparrow* *(Melospiza lincolnii)* - uncommon summer bird; breeding records exist; unverified in Park

Song Sparrow (Melospiza melodia) - common summer bird; breeding and winter records exist; verified in Park

McCown's Longspur* *(Calcarius mccownii)* - uncommon summer bird; breeding and winter records exist; unverified in Park

Snow Bunting *(Plectrophenax nivalis)* - uncommon migrant; winter records exist; unverified in Park

FAMILY FRINGILLIDAE

Evening Grosbeak *(Coccothraustes vespertina)* - uncommon summer bird; breeding and winter records exist; verified in Park

Pine Grosbeak (*Pinicola enucleator)* - uncommon summer bird; breeding and winter records exist; verified in Park

Cassin's Finch *(Carpodacus cassinii)* - uncommon summer bird; breeding and winter records exist; verified in Park

House Finch* *(Carpodacus mexicanus)* - uncommon summer bird; breeding and winter records exist; unverified in Park

Pine Siskin *(Carduelis pinus)* - uncommon summer bird; breeding and winter records exist; verified in Park

American Goldfinch *(Carduelis tristis)* - common summer bird; breeding and winter records exist; verified in Park

Distribution of Amphibians and Reptiles in or around Lewis and Clark Caverns State Park:

AMPHIBIANS

Long-toed Salamander *(Ambystoma macrodactylum)* - Western Montana; common; unverified in Park

Tiger Salamander *(Ambystoma tigrinum)* - Central and Eastern Montana; common; unverified in Park

Tailed Frog *(Ascaphus truei)* - Western Montana along mountain streams; common in suitable habitat; unverified in Park

Western Toad *(Bufo boreas)* - Western Montana; uncommon and local; verified in Park (1999)

Pacific Chorus Frog *(Pseudacris regilla)* - Western Montana; localized; status unknown unverified in Park

Northern Leopard Frog *(Rana pipiens)* - Central and Eastern Montana in nonforest habitats; locally common; status unknown in many areas; unverified in Park

Spotted Frog *(Rana pretiosa)* - Western Montana; common; unverified in Park

Wood Frog *(Rana sylvatica)* - Status unknown; may occur in state; unverified in Park

REPTILES

Short-Horned Lizard *(Phrynosoma douglasi)* - Widely distributed in Eastern Montana; have been found in the Missouri Headwaters area; unverified in Park

Sagebrush Lizard *(Sceloporus graciosus)* - Locally common along southern border of Montana; unverified in Park

Northern Alligator Lizard *(Elgaria coerulea)* - Localized distribution in western Montana; unverified in Park

Western Skink *(Eumeces skiltonianus)* - Known from only a few locations in western Montana; status unknown in other areas; unverified in Park

Painted Turtle *(Chrysemys picta)* - Common and widespread across most of Montana; verified in Park

Spiny Softshell *(Trionyx spiniferus)* - Mainly found in the Yellowstone and Missouri rivers and their major tributaries; status unknown in other drainages; unverified in Park

Rubber Boa *(Charina bottae)* - Throughout western Montana; verified in Park

Racer *(Coluber constrictor)* - Common in eastern Montana; localized in western Montana; verified in Park

Western Hognose Snake *(Heterodon nasicus)* - Reported infrequently throughout state; unverified in Park

Bull Snake *(Pituophis catenifer)* - Throughout Montana; common; verified in Park

Western Rattlesnake *(Crotalus viridis)* - Locally common throughout most of Montana; verified in Park

Common Garter Snake *(Thamnophis sirtalis)* - Throughout Montana; common; verified in Park

Western Terrestrial Garter Snake *(Thamnophis elegans)* - Throughout Montana; common; verified in Park

Milk Snake *(Lampropeltis triangulum)* – Very rare and local. Potential sighting (1999); unverified in Park.

Distribution of Mammals in or around Lewis and Clark Caverns State Park:

ORDER INSECTIVORA, FAMILY SORICIDAE

Masked Shrew *(Sorex cinereus)* - Dry woods, western half of state; unverified in Park

Hayden's Shrew *(Sorex haydeni)* - Moist woods and meadows, western part of state; common; unverified in Park

ORDER CHIROPTERA (Bats), FAMILY VESPERTILIONIDAE

Little Brown Myotis *(Myotis lucifugus)* - Throughout state; common; verified in Park

Yuma Myotis *(Myotis yumanensis)* - Throughout state; less common than above; unverified in Park

Long-eared Myotis *(Myotis evotis)* - Throughout state; fairly common; verified in Park

Long-Legged Myotis *(Myotis volans)* - Western half of state, higher elevations, unverified in Park

Least Bat or Small-Footed Myotis *(Myotis ciliolabrum)* - Throughout state; verified in Park

Fringed Myotis *(Myotis thysanodes)* - Very rare; verified in Park

California Myotis *(Myotis californicus)* – Rare; verified in Park

Big Brown Bat *(Eptesicus fuscus)* – Common throughout state; unverified in Park

Hoary Bat *(Lasiurus cinereus)* - Throughout state in migration; unverified in Park

Townsend's Big-eared Bat *(Corynorhinus townsendii)* - Rare; verified in Park

Silver-haired Bat *(Lasionycteris noctivagans)* - Wooded areas throughout state; common; unverified in Park

FAMILY LEPORIDAE

White-Tailed Jackrabbit *(Lepus townsendii)* - Common throughout state in open areas; verified in Park

Mountain Cottontail *(Sylvilagus nuttallii)* - Common in lower elevations throughout state; verified in Park

ORDER RODENTIA, FAMILY SCIURIDAE

Yellow-bellied Marmot *(Marmota flaviventris)* - Rocky areas and mountains, western part of state; common; verified in Park

Columbian Ground Squirrel *(Spermophilus columbianus)* - Western third of state; common; unverified in Park

Richardson's Ground Squirrel (Spermophilus richardsonii) - Eastern two thirds of state; common; verified in Park

Uinta Ground Squirrel *(Spermophilus armatus)* - Yellowstone Park and surrounding areas; common; verified in Park

Golden-mantled Ground Squirrel *(Spermophilus lateralis)* - Rocky areas in mountains of central and western regions; common; unverified in Park

Least Chipmunk *(Eutamias minimus)* - mostly sagebrush areas, central and eastern areas of state; common; verified in Park.

Yellow Pine Chipmunk *(Eutamias amoenus)* - Lower elevations in western part of state; common; verified in Park

Red-tailed Chipmunk *(Eutamias ruficaudus)* - Higher elevations in western mountains; common; verified in Park

Uinta Chipmunk *(Eutamias umbrinus)* - Higher elevations in Yellowstone Park vicinity; unverified in Park

Red Squirrel *(Tamiasciurus hudsonicus)* - Coniferous forests in western part of state; common; verified in Park

Northern Pocket Gopher *(Thomomys talpoides)* - Throughout state; common; unverified in Park

FAMILY CASTORIDAE

Beaver *(Castor canadensis)* - Along streams and lakes throughout state; common; verified in Park

FAMILY CRICETIDAE

Deer Mouse *(Peromyscus maniculatus)* - Throughout state; common; verified in Park

White-footed Mouse *(Peromyscus leucopus)* - Eastern half of state; unverified in Park

Bushy-tailed Wood Rat *(Neotoma cinerea)* - Throughout state; common; verified in Park

Gapper's Red-backed Mouse *(Clethrionomys gapperi)* - Coniferous forests, western half of state; common; unverified in Park

Meadow vole *(Microtus pennsylvanicus)* - Wet meadows throughout state; common; unverified in Park

Long-tailed vole *(Microtus longicaudus)* - wet woods in central and western areas; common; unverified in Park

Mountain vole *(Microtus montanus)* - Dry grasslands; western and central Montana; common; unverified in Park

Sagebrush vole (Lagurus curtatus) - Sagebrush areas in eastern and central mountains; rare; unverified in Park

Muskrat (Ondatra Zibethica) - Ponds and streams throughout state; common; verified in Park

FAMILY ZAPODIDAE

Western Jumping Mouse *(Zapus princeps)* - High meadows, wet woods in western half of state; unverified in Park

FAMILY MURIDAE

House Mouse *(Mus musculus)* - Throughout state; common; verified in Park

FAMILY ERITHIZONTIDAE

Porcupine *(Erethizon dorsatum)* - Throughout state; common; verified in Park

ORDER CARNIVORA, FAMILY URSIDAE

Black Bear *(Ursus americanus)* - Forested areas; common; verified in Park

FAMILY MUSTELIDAE

Short-tailed Weasel *(Mustela erminea)* - Forested areas in western half of state; common; verified in Park

Long-tailed Weasel *(Mustela frenata)* - Throughout state; common; verified in Park

Mink (Mustela vison) - Throughout state; marsh areas and streambanks; common; verified in Park

Striped Skunk *(Mephitis mephitis)* - Throughout state; common; verified in Park

Badger *(Taxidea taxus)* - Throughout state; common; verified in Park

River Otter *(Lutra canadensis)* - On large streams, mostly in western portion of state; rare; verified in Park

FAMILY PROCYONIDAE

Raccoon *(Procyon lotor)* - Throughout state; common; verified in Park

FAMILY CANIDAE

Red Fox *(Vulpus vulpus)* - Throughout state; common; verified in Park

Coyote *(Canis latrans)* - Throughout state; common; verified in Park

FAMILY FELIDAE

Mountain Lion *(Felis concolor)* - Western and central areas; uncommon; verified in Park

Bobcat *(Lynx rufus)* - Throughout state; common; verified in Park

Lynx *(Lynx canadensis)* – Western and central areas; uncommon; verified in Park (1999)

ORDER ARTIODACTYLA, FAMILY CERVIDAE

Elk *(Cervus elaphus)* - Throughout state; common; verified in Park

White-tail Deer *(Odocoileus virginianus)* - Forested areas and river bottoms throughout state; common; verified in Park

Mule Deer *(Odocoileus hemionus)* - Throughout state; common; verified in Park

Moose *(Alces alces)* - Western half of state; fairly common; verified in Park

FAMILY BOVIDAE

Pronghorn Antelope *(Antilocapra americana)* - Throughout state; common; verified in Park

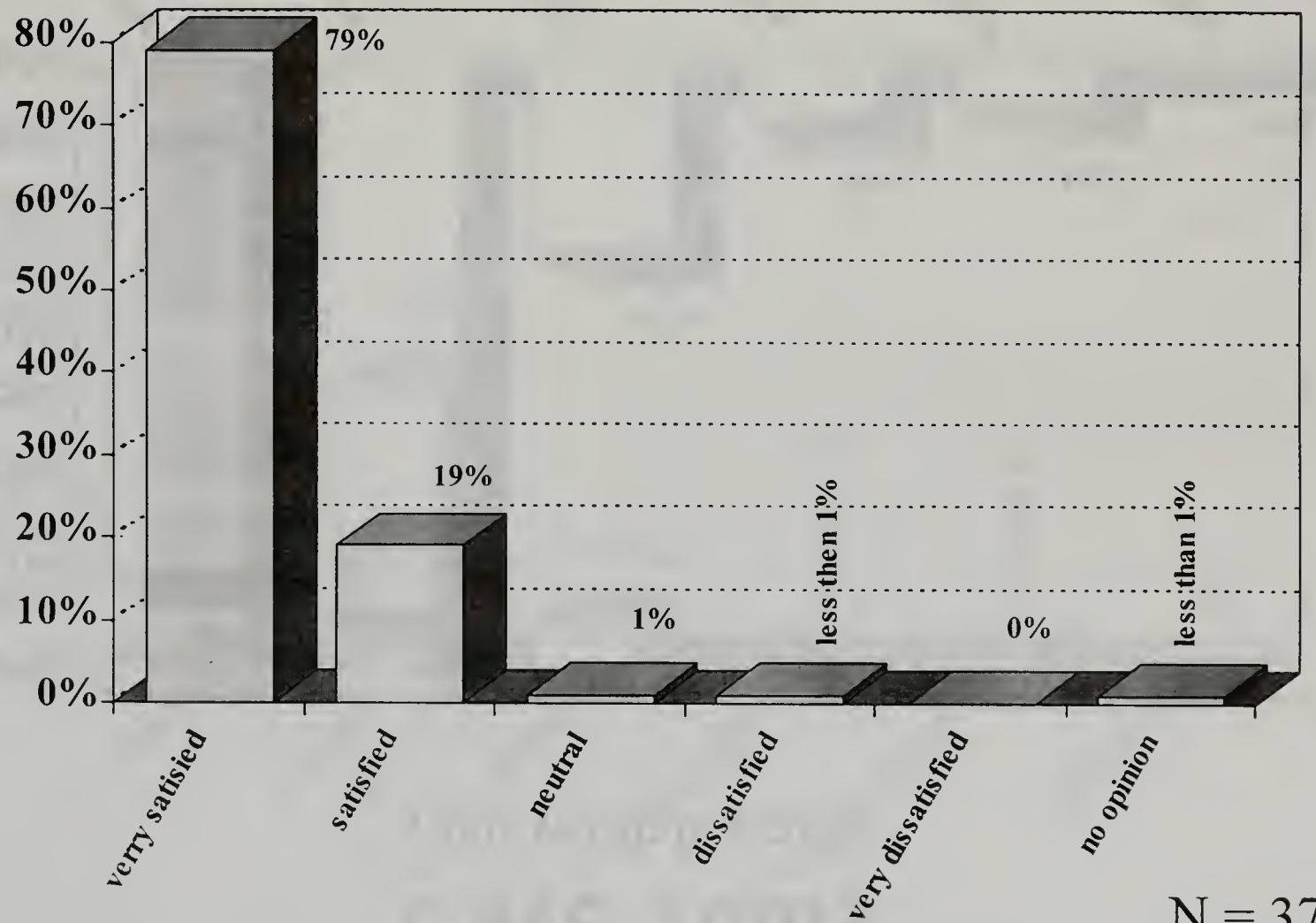
Mountain Goat *(Oreamnos americanus)* - High mountains of central and western Montana; uncommon; verified in Park

APPENDIX G:

Summary of Park Visitor Survey (1994)

Cave Tours

(overall satisfaction with tour)



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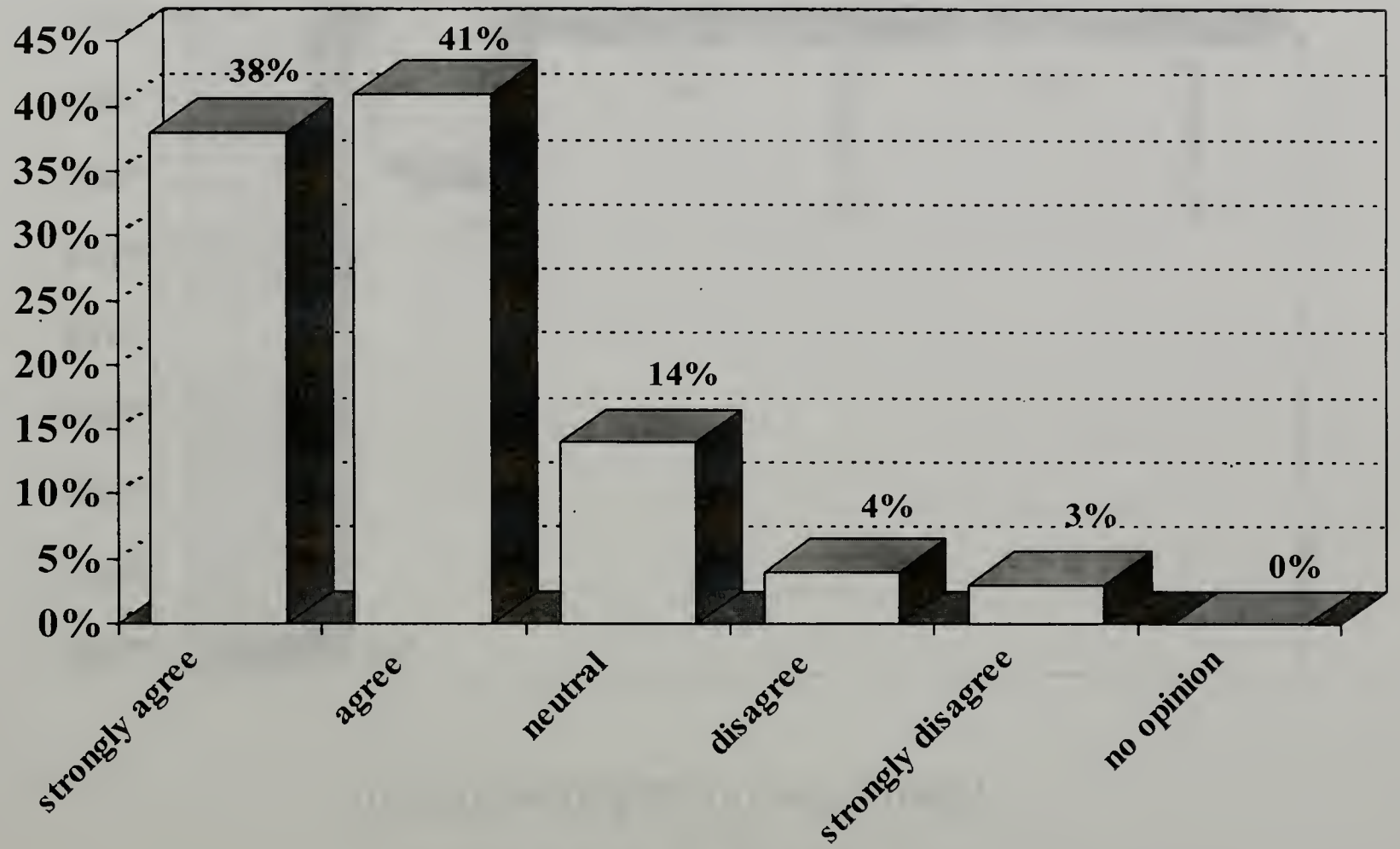
Cave Tours

(tour worth the cost)



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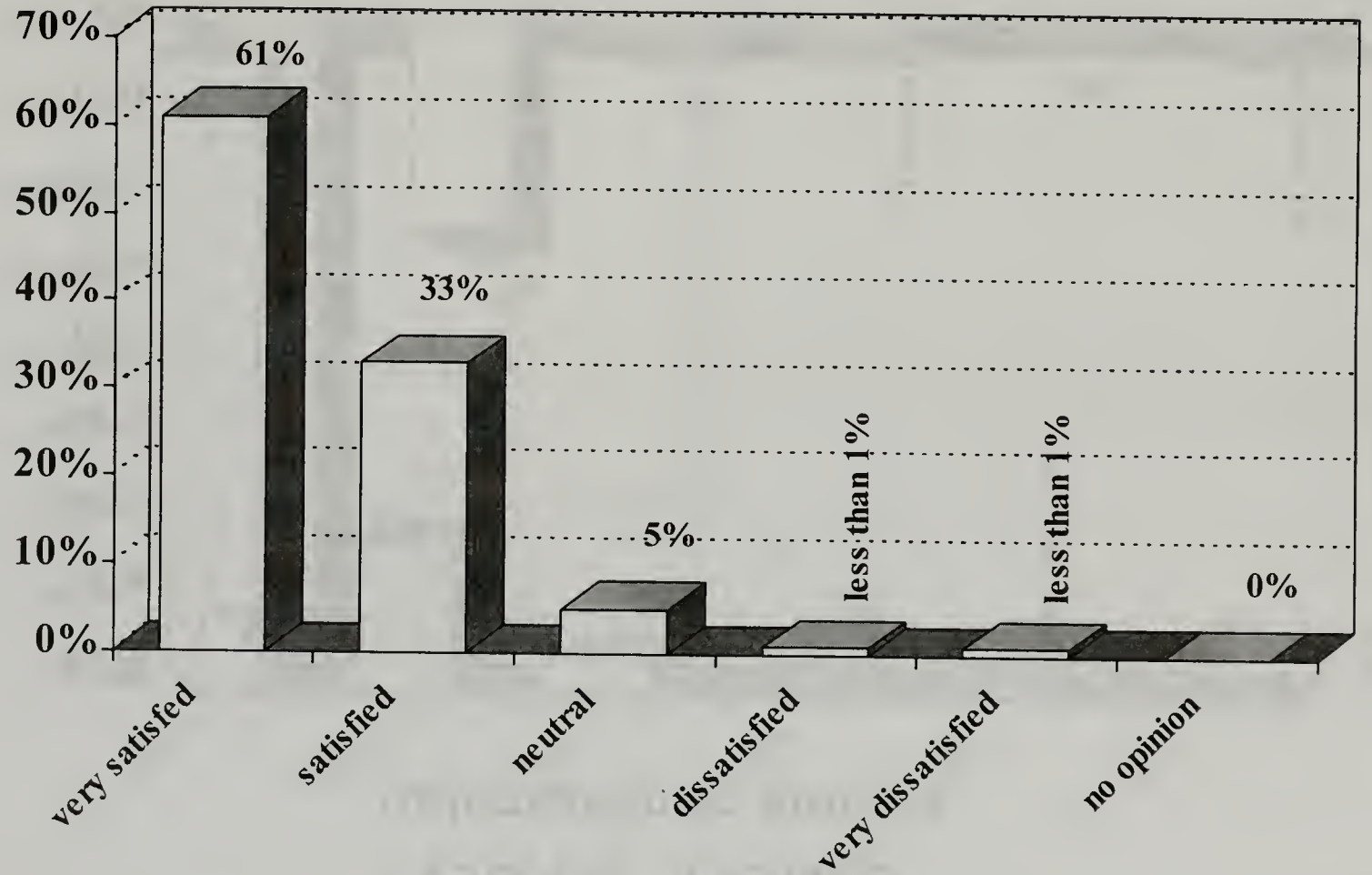
Tours - Information on Geology

(satisfaction with information provided)



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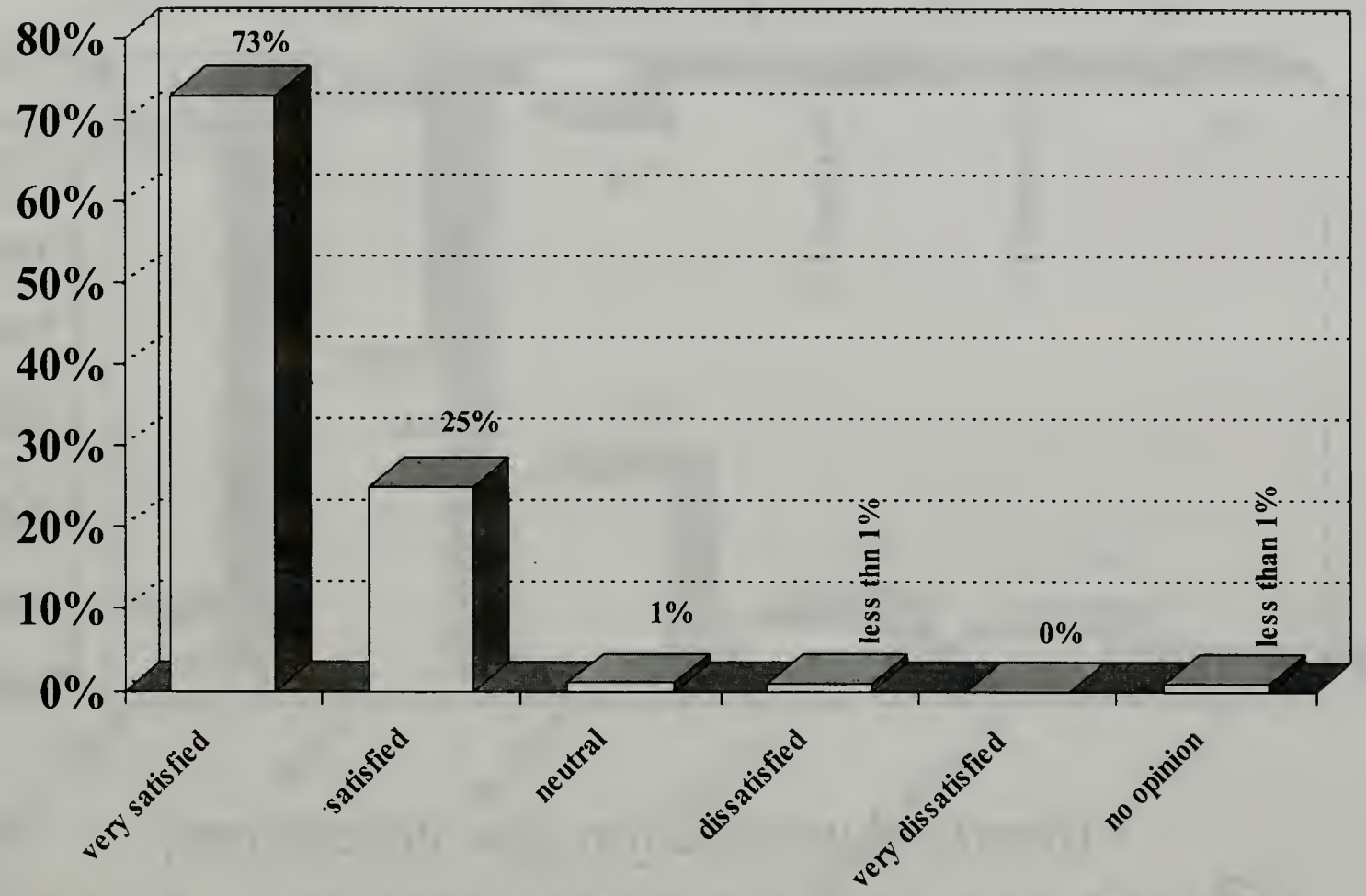
Cave Tours

(information on history)



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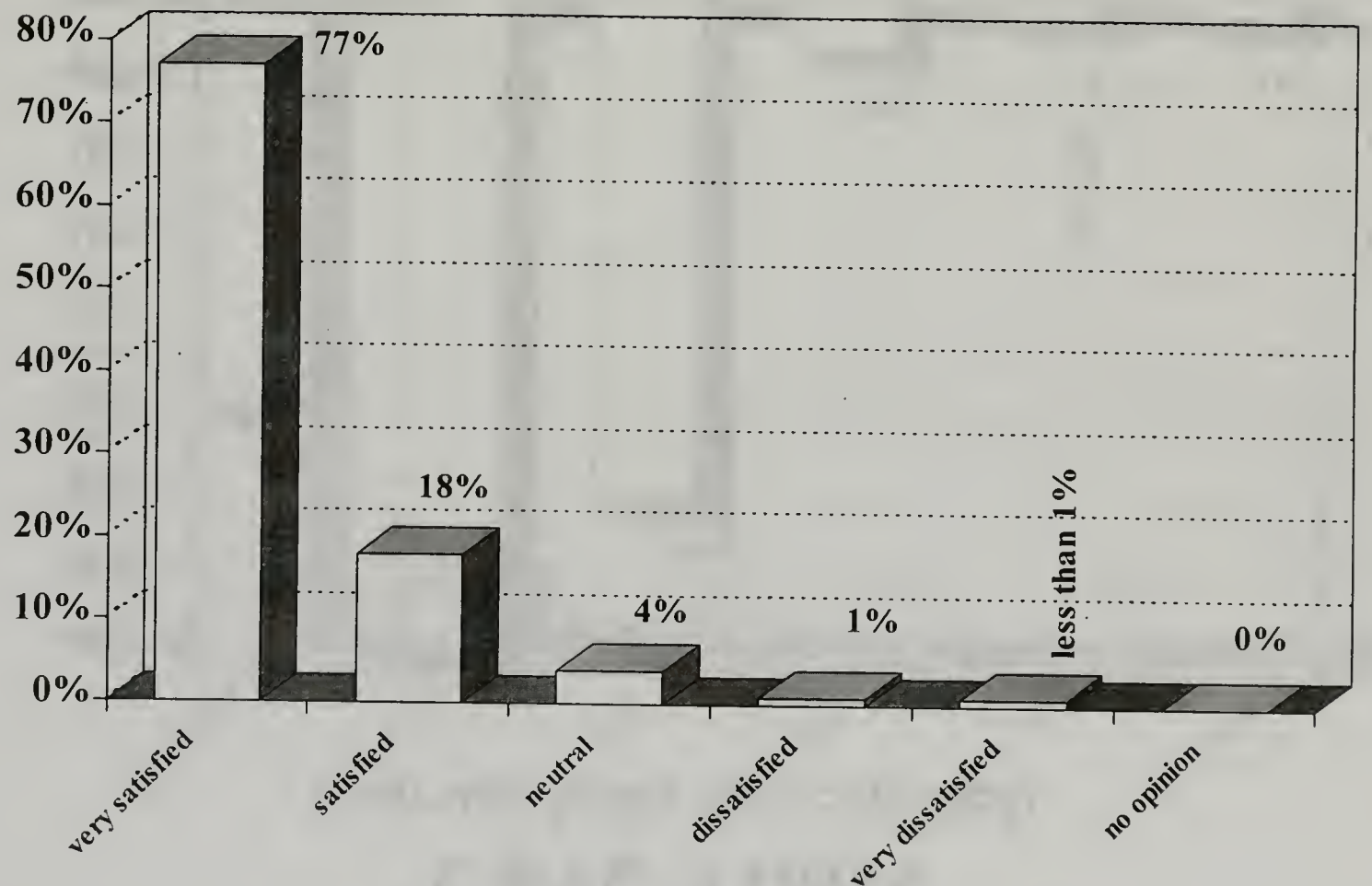
Cave Tours

(satisfaction with humor)



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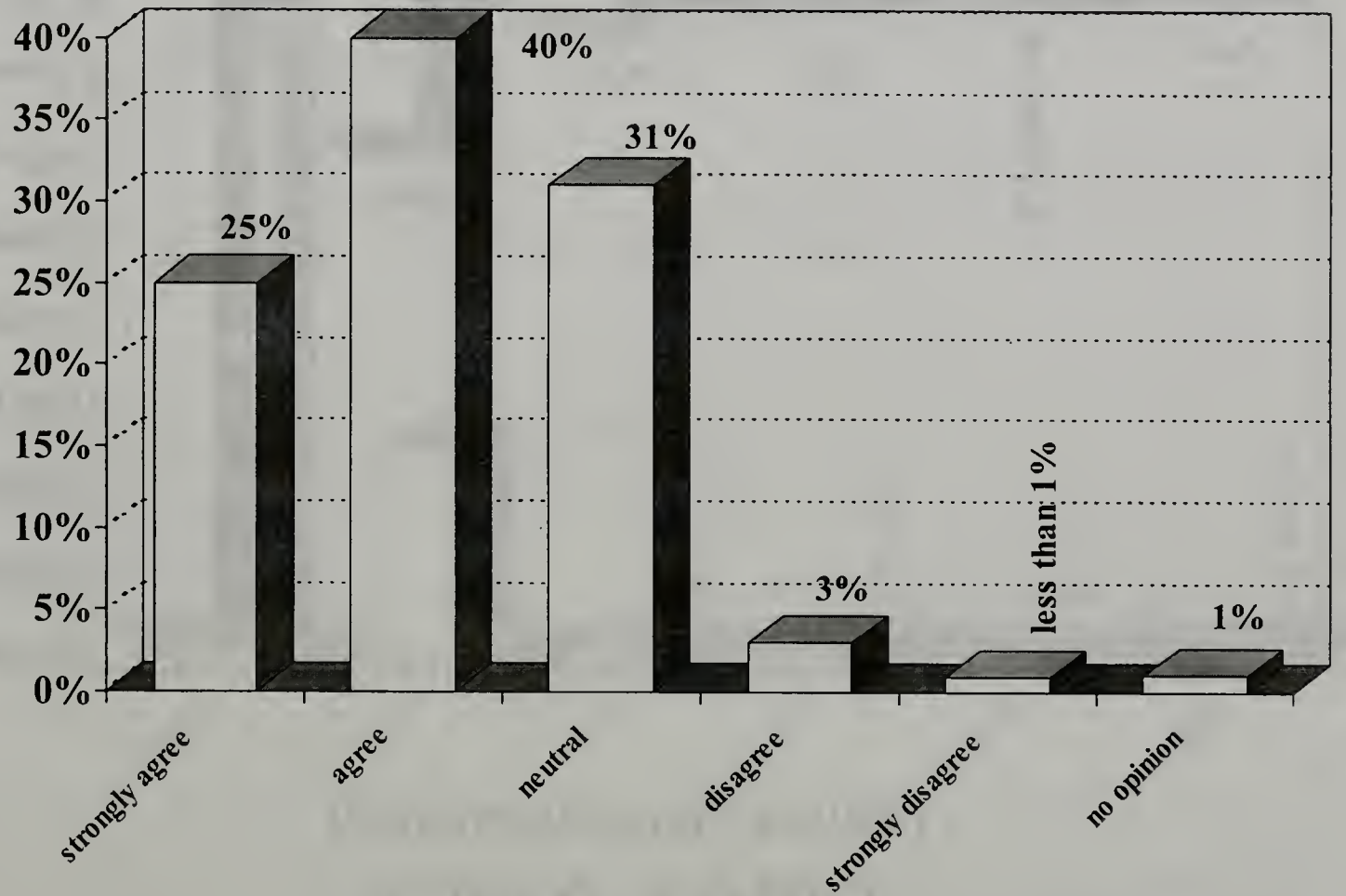
Cave Tours

(tour was better than expected)



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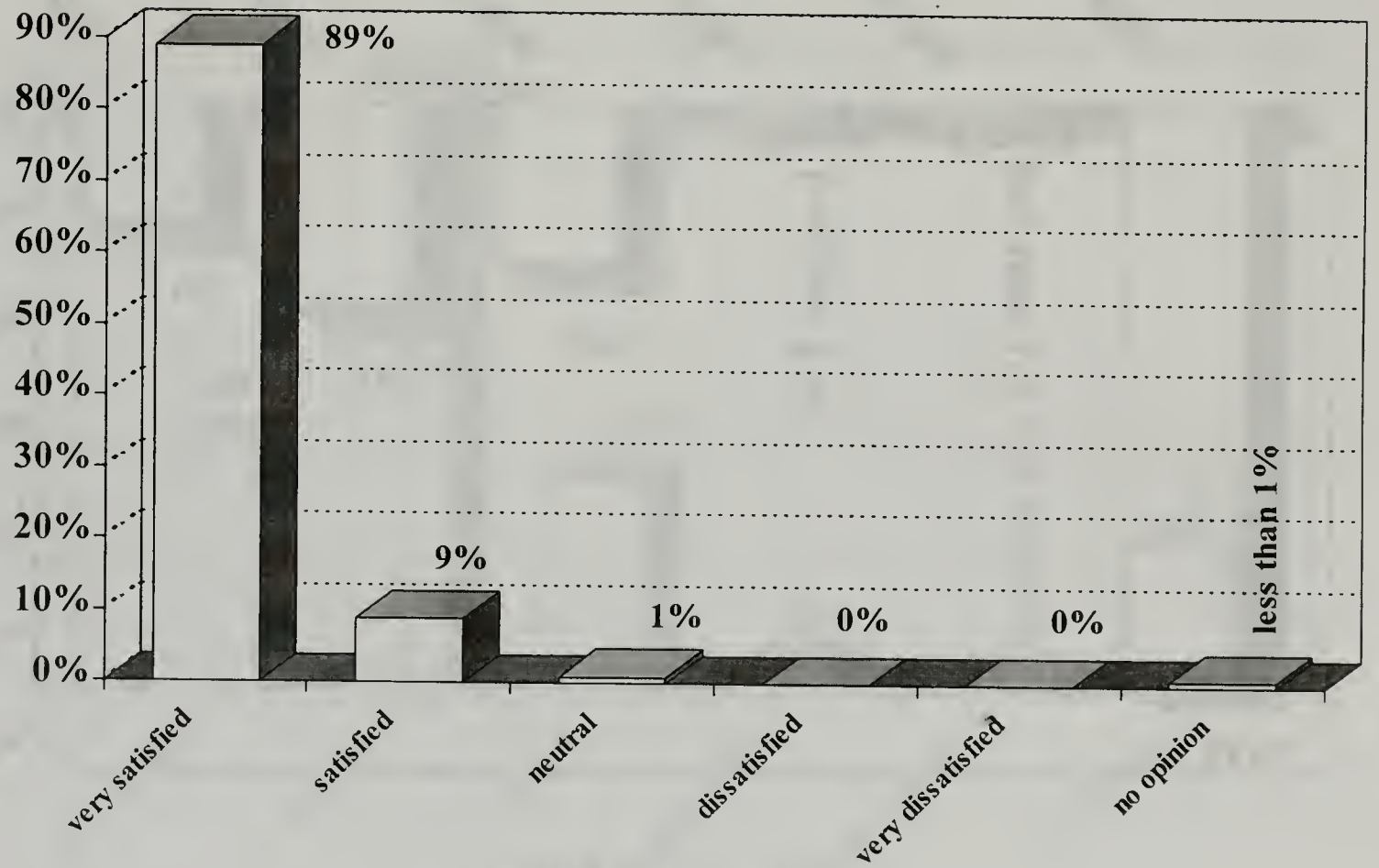
Cave Tours

(tour guide courtesy)



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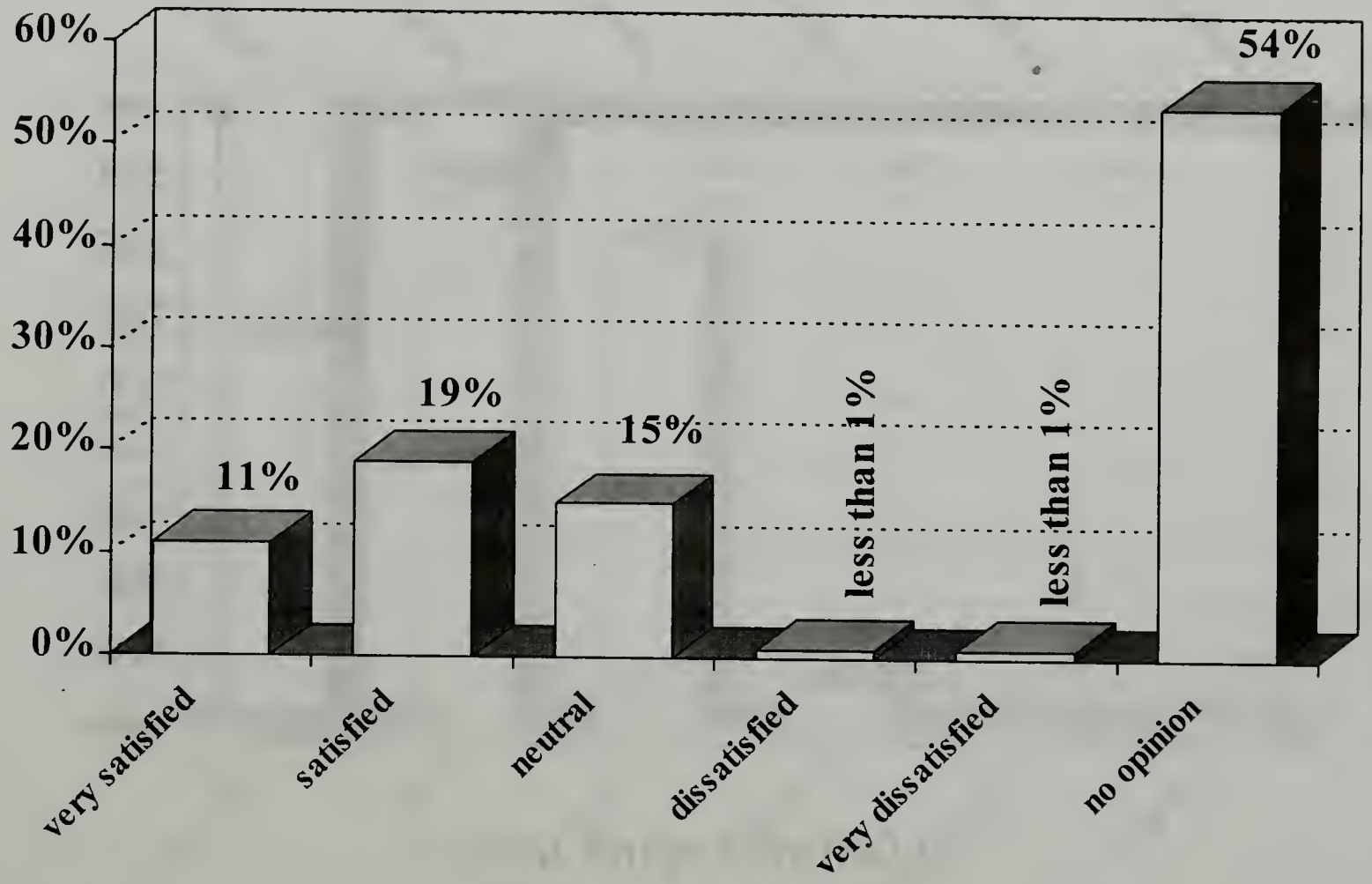
Park Facilities

(campground)



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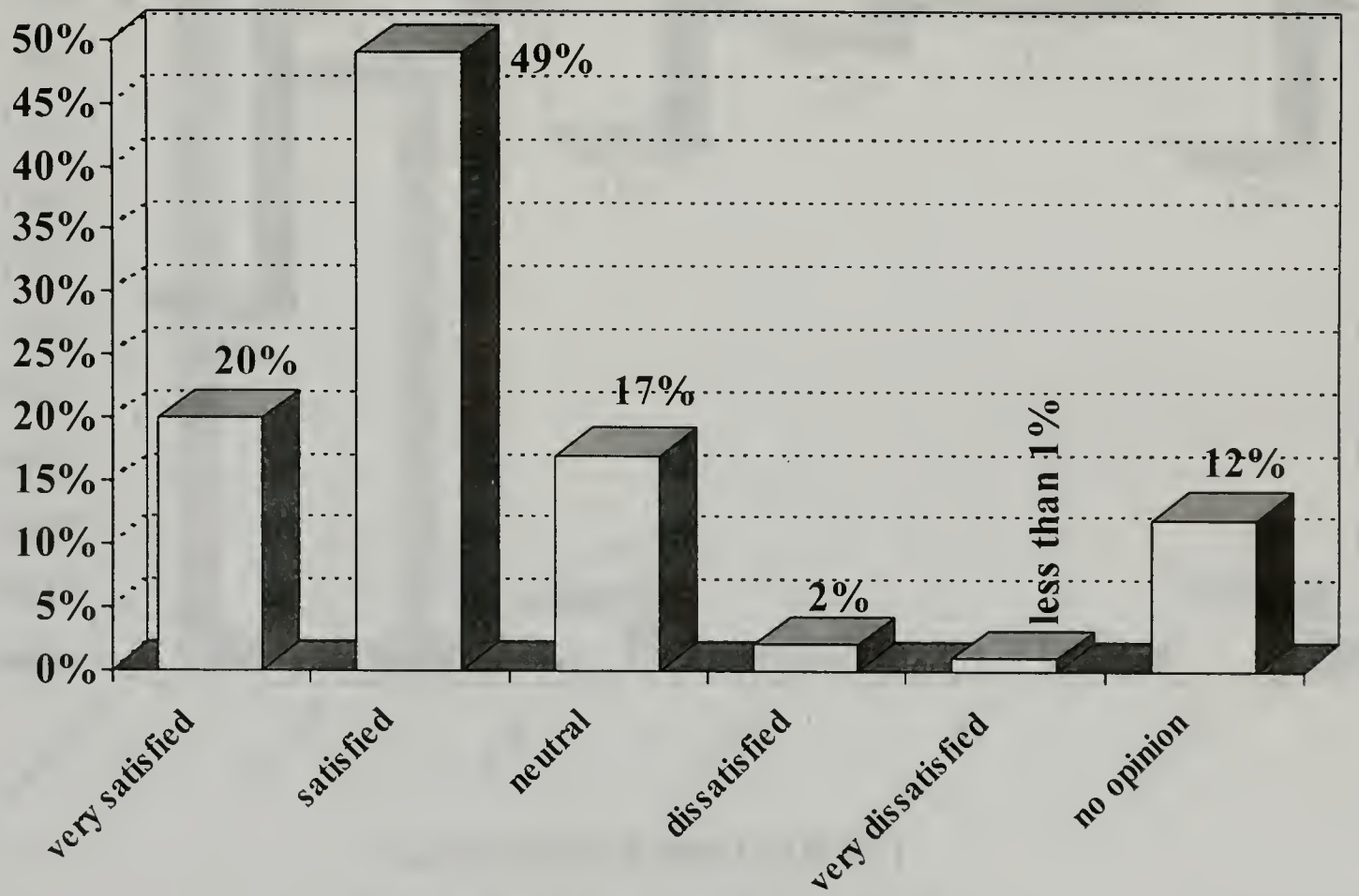
Park Facilities

(upper visitor center displays)



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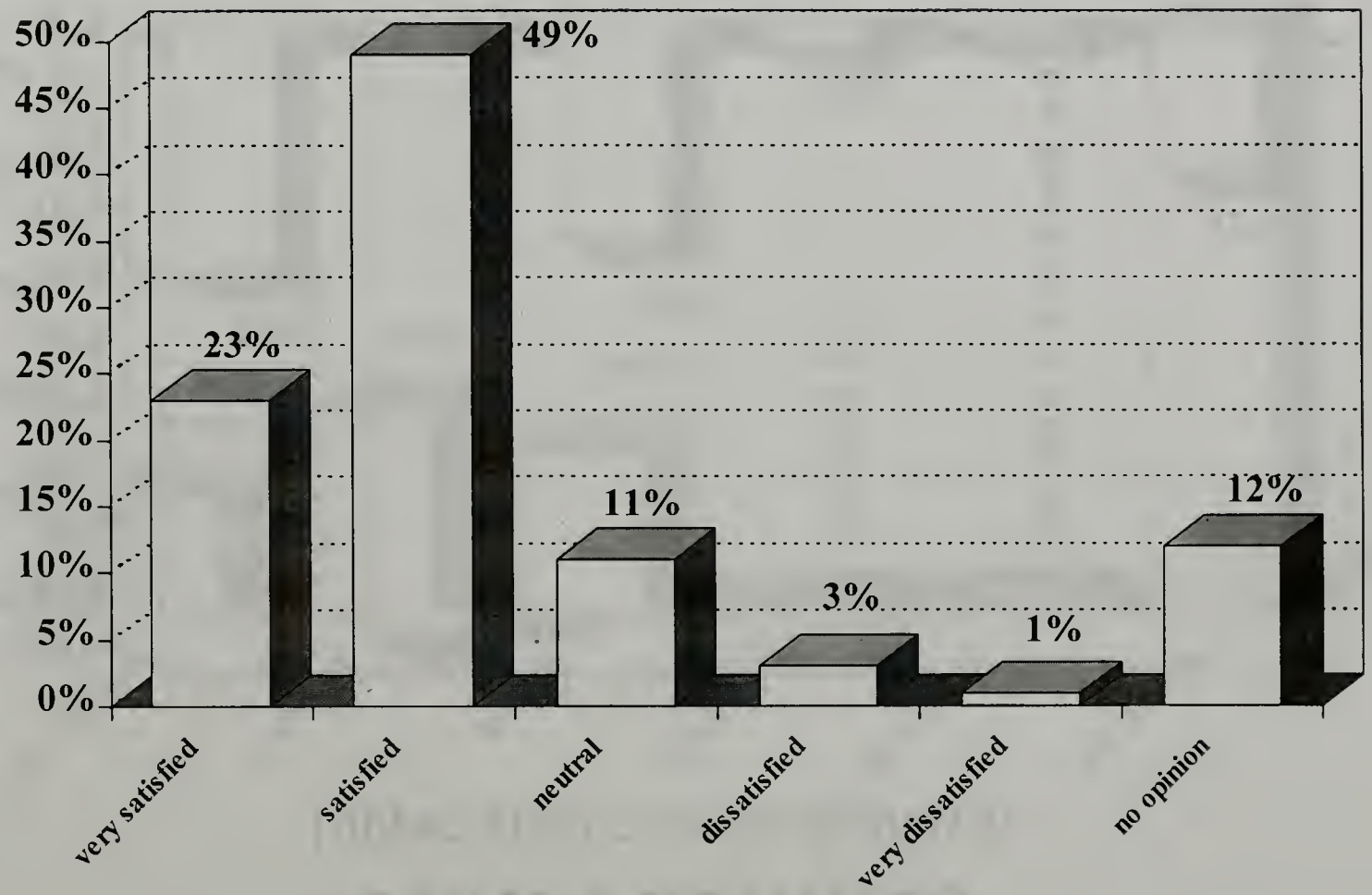
Park Facilities

(restroom cleanliness)



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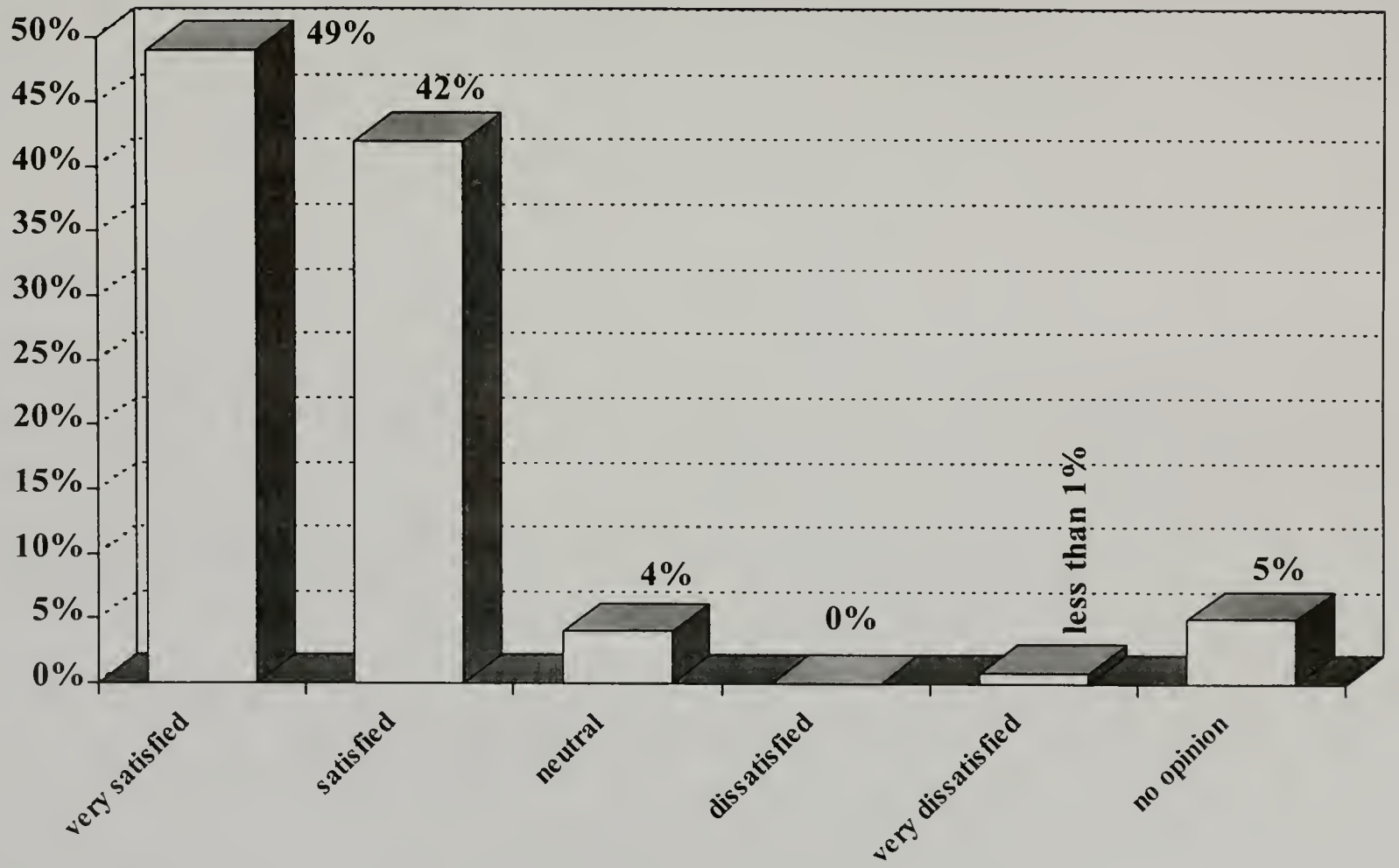
Park Staff

(helpfulness of park employees)



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